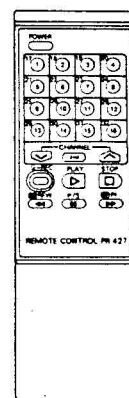
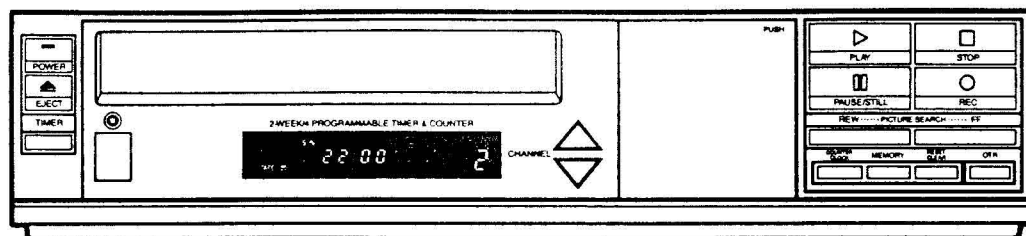


VIDEO CASSETTE RECORDER



SPECIFICATIONS

Format: VHS PAL standard
 Recording System: Rotary, azimuth two-head helical scanning system
 Television System: PAL color and B/W signal
 Tape Width: 12.65 mm (1/2 inch)
 Tape Speed: 23.39 mm/sec
 Record/Playback Time: 4 hours with E-240 Tape
 FF/REW Time: Less than 6 min. with E-180
 Heads:
 1) Video: 2 Rotary heads
 2) Audio/Control: 1 stationary head (Mono)
 3) Full track erase: 1 stationary head

Video
 Input: 0.5 to 2.0 Vp-p 75 ohm unbalanced
 Output: 1.0 Vp-p 75 ohm unbalanced
 Signal-to-Noise Ratio: Better than 40dB
 Horizontal Resolution: More than 240 Lines

Audio
 Input: -8dBm, 50Kohm unbalanced
 Output: -3dBm 1Kohm unbalanced
 Signal-to-Noise Ratio: Better than 40dB
 Frequency Response: 100Hz-8.0 KHz (-3dB)
 Receiving channels: VHF I, VHF III, UHF IV/V
 RF Output: CCIR UHF channel 32 to 40 (adjustable), Preset to 36

Power Requirement: AC 220V, 50Hz
 Operating Temperature: 5 to 40 DEG. C (41°F-104°F)
 Operating Humidity: 10% - 75%

Power Consumption: Approx. 28 Watts (When the POWER button is OFF Approx. 7.0 watts)
 Dimensions: 420 (W)×93 (H)×345 (D) mm
 Weight: 14.55 lbs (6.6 kg)

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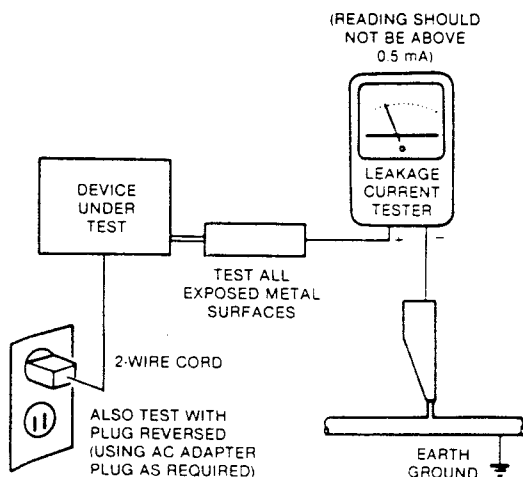
SAFETY PRECAUTIONS

1. **Before returning a Video Cassette Recorder to the customer,** always make a safety check of the entire instrument, including, but not limited to the following items:

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks.

Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.

- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to: (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.
- c. **Antenna Cold Check**—With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, to each of the coaxial connectors. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.



AC Leakage Test

- d. **Leakage Current Hot Check**—With the instrument completely reassembled plug the AC line cord directly into a 220V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 *Leakage Current for Appliances* and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts

of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, controls shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR CONNECTING ANTENNA OR ACCESSORIES.

e. AC Leakage Test

Avoid shock hazards. The television instrument, accessory, or cable(s) to which this VCR is connected should have the applicable sections of the antenna cold check and the leakage current hot check performed. Do not connect this VCR to a TV antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety-related notes on or inside the VCR cabinet and chassis.
3. **Design Alteration Warning**—Do *not* alter or add to the mechanical or electrical design of this Video Cassette Recorder. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.
4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges. b. near thermally hot parts—be sure that leads and components do not touch thermally hot parts c. the AC supply, and d. antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.
5. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
6. **PRODUCT SAFETY NOTICE**
Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a (*) or (Δ) on schematics and parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. Products Safety is under review continuously and new instructions are issued whenever appropriate.

Electrostatically Sensitive (ES) devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with Es devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a *grounded-tip* soldering iron to solder or unsolder ES devices.
4. Use only an *anti-static* type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do *not* use freon-propelled chemicals. These can generate electrical charges sufficient to damage Es devices.
6. Do *not* remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement Es device, touch the protective material to the chassis or circuit assembly into which the device will be installed. **CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

1. GENERAL DESCRIPTION

1-1. GENERAL INFORMATION

•Operation Modes

Play, still, forward search, reverse search, record, record pause, fast forward and rewind operations are possible. 2-Video Head System uses two video heads on the upper cylinder. Two video heads (CH-1/CH-2: $+60\text{ }\mu\text{m}/-80\text{ }\mu\text{m}$) are used during record and playback

•Unattended (Timer) Recording

The programmable timer can be preset up to two weeks in advance to record up to 4 preselected programs. The Timer turns your VCR on and off and changes channels automatically.

•One Touch Recording (OTR)

Express Recording permits unattended recording with the touch of a button. You can record a program for the time from 1 minute to the desired amount without setting the Programmable Timer.

•Cable TV Tuner

Allows you to tune mid and super-band cable channels without the use of an external device. The tuning system makes cable television channel selection on most systems as easy and convenient as VHF and UHF tuning.

•Memory Stop

When the Multifunction Display is in the "Counter" Position, a tape that is being rewound automatically stops when the Tape Counter reads 9999.

•Automatic Power On

The VCR will automatically turn power on when you insert a cassette without pushing POWER button.

•Automatic Playback

When you insert the cassette with the Record Safety Tab removed, the VCR will turn power on and playback automatically without pushing POWER and PLAY button. If you use the cassette with Record Safety Tab intact, the VCR will turn power on automatically and be in STOP mode but do not playback.

•Automatic Rewind

The VCR automatically rewinds the tape when the end of the tape is reached. To avoid accidental erasure during Timer Recording or Express Recording, it stops at the end of the tape but does not rewind.

•Mode Indication in the Multifunction Display

The VCR modes will be indicated in the Multifunction Display with a sign or a character of white or red color so the operator can see the modes easily.

•Remote Control with Special Effects

Hand-Held unit offers play, stop, record, rewind, fast forward, pause/still, direct position selection (17 keys), channel up/down, power on/off, one touch search (forward or reverse).

•Cable-Ready Frequency Synthesis Tuner

You can select unscrambled Cable TV channels S1 to S20, without using an external converter.

The frequency-synthesis tuner can select a total of 80 channels including 20 cable channels.

1-2. OPERATING CONTROLS AND FUNCTIONS

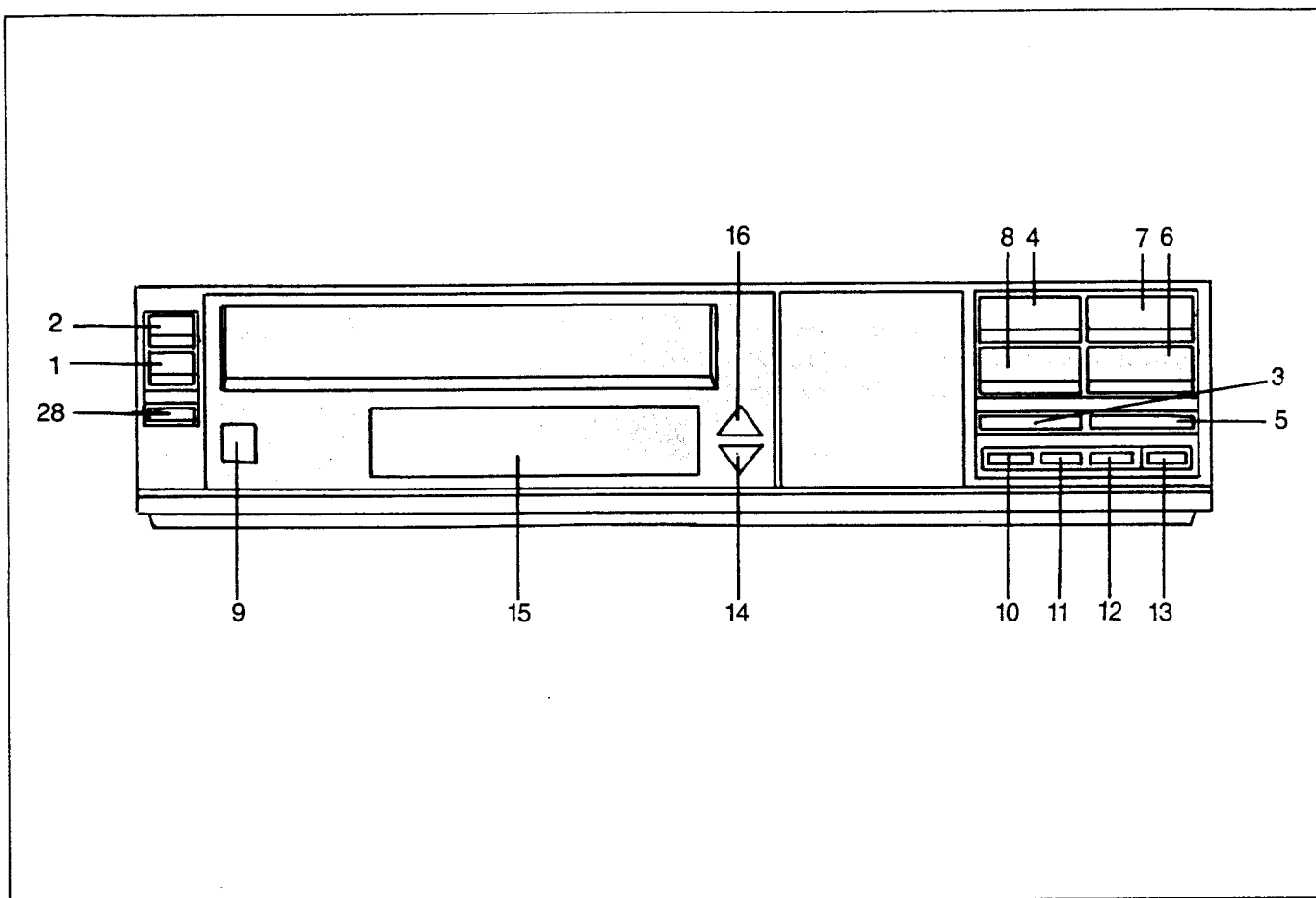


Fig. 1 Front View

1. EJECT Button

Press from stop position to remove a cassette. And the "Tape-in" indicator () in the Multifunction Display will disappear.

2. POWER Button

Press this button to turn the VCR power on and off. Red LED on this button lights when power is on.

3. REW (Rewind/Reverse Picture Search) Button

Press from stop position to rewind the tape after either recording or playback.

Press from play mode to visibly reverse scan program material. When the picture reaches the point you are looking for, press the PLAY button to resume normal playback.

4. PLAY Button

Press to play pre-recorded material. "▶" sign will appear in the Multifunction Display.

5. FF (Fast Forward/Forward Picture Search) Button

Press from stop position for fast access to desired program material. Press from play mode to visibly forward scan program material. When the picture reaches the point you

are looking for, press the PLAY button to resume normal playback.

6. REC (Record) Button

Press the Record button to start recording. "REC" is indicated in the Multifunction Display with red color.

7. STOP Button

Press to stop the tape during playback, record, rewind, fast forward and pause/still.

8. P/S (Pause/Still) Button

Press P/S button to stop the tape momentarily during either recording or playback. "■ ■" is indicated in the Multifunction Display. This is useful to prevent recording of unwanted material or to freeze the picture on TV screen. And of course, it is useful to stop the tape during an interruption such as a phone call.

9. REMOTE SENSOR

This point receives signals from Remote Hand Unit.

10. COUNTER Button

The tape counter or the clock can be selected and viewed by each push of this button.

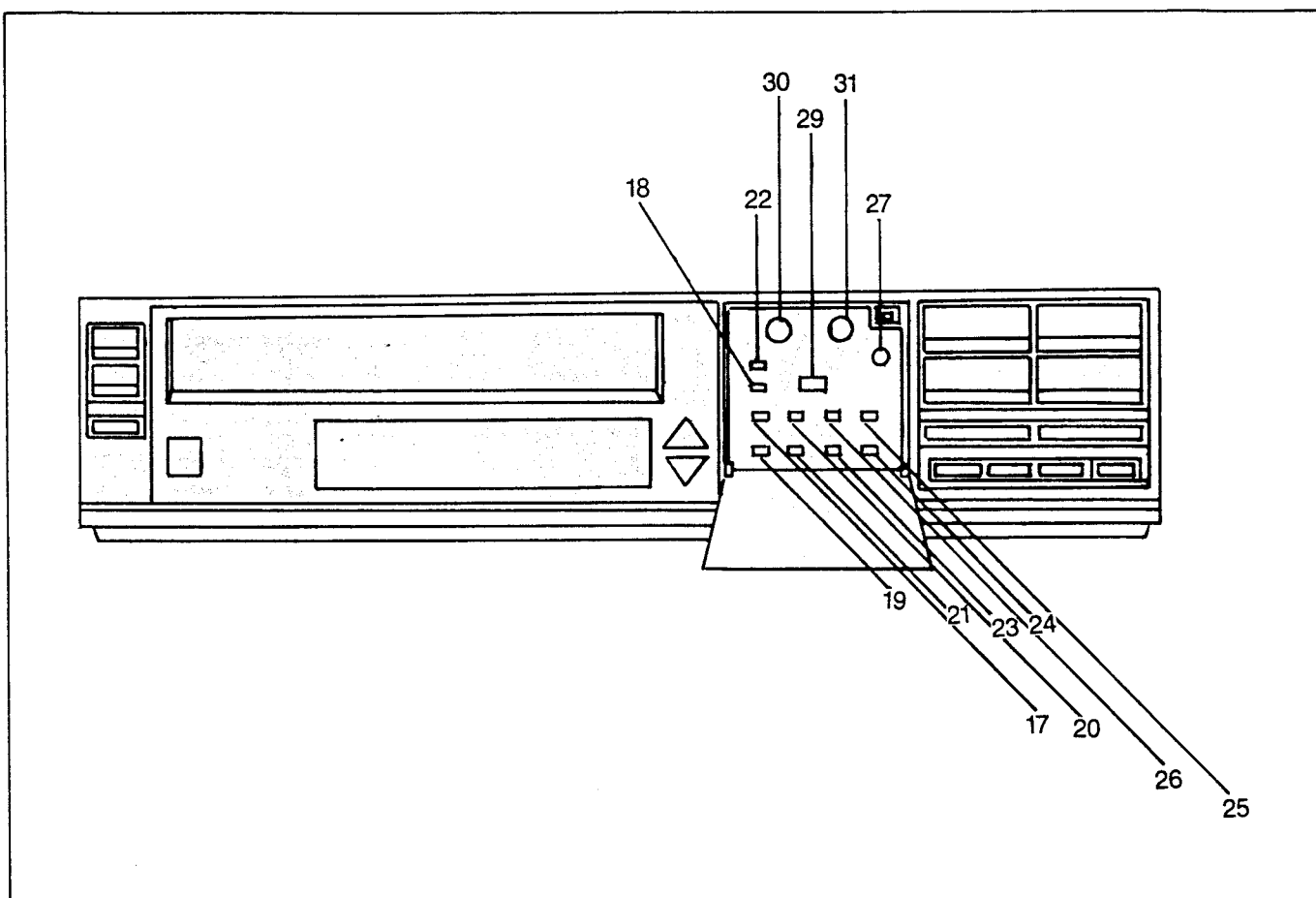


Fig. 2 Secondary Control Door opened

11. MEMORY Button

Use this button to easily find the beginning of a particular segment you want to repeat. Press before rewinding, then the cassette will rewind to a counter reading of 9999 instead of the start point of the tape. Pressing Rewind button again will cause the VCR to rewind to the start point of the tape. Since you can reset the counter to 0000 at any point, the feature provides a convenient means of relocating the beginning of a recording or the beginning of a particular segment you want to repeat.

12. RESET Button

Press to reset the counter to 0000, or to clear the Timer setting Program. It is used to reset the Counter in the counter position and to clear the program in the Timer Program position.

13. OTR (ONE TOUCH RECORDING) Button

It enables you to do impromptu recording at any time. Just select the channel and press the OTR button to desired amount of recording time with automatic power off at the end of segment. (30 minutes increased by each push)

14. CHANNEL DOWN (V) Button

Press to select the channel you wish to record or view on TV. Continuous holding of button's will change the channels by 1's.

15. Multifunction Display

This Display is used as an indicator for: timer programming (program number; 1-4, start time; ON, end time; OFF, 2nd week; NEXT), present time of day, tape counter, timer recording (TIMER: red), memory stop (MEM), tape-in (), channel, Operating Mode (record; REC: red, play, , pause/still; , tape movement (6dots);).

16. CHANNEL UP (A) Button

17. T-ADJ (Time Adjust) Button

Use to set the clock.

18. T-PGM/CHECK Button

Press to check timer program or to set timer program.

19. DAY Button

Use to set the day for the present time or timer program.

20. Time+ /MFT+

Use to set the clock upward and to set the timer for unattended recording.

This button enables you to tune manually after you select preset mode to push the PRESET button.

21. Time- /MFT-

Use to set the clock down ward and to set the timer for unattended recording.

This button enables you to tune manually after you select preset mode to push the PRESET button.

22. AFT Button

Push this button for the fine picture.

23. PRESET Button

Push this button when you have to set TV channel in your VTR and push this button when channel setting is ended.

24. SEARCH Button

Push this button to find TV channel continually and automatically.

25. STORE Button

Push this button to store the TV channel.

26. CLEAR Button

Push this button to delete stored channel.

27. V-LOCK Control

In still mode, Adjust this volume to minimize vertical shaking on the TV screen

28. TIMER Button

Press after programming for unattended recording

29. TV/AUX/AV SELECT SWITCH

Select recording signal from the tuner or Audio/Video In JACK, or SCART JACK

30. TRACKING Control

When playing prerecorded tapes or tapes on the other unit, "noise" or black and white streaks may appear on your TV screen. If this occurs, rotate the Tracking Control on either direction until you see a clear picture. Keep this knob in the center position at all times (Unless an adjustment is required).

31. PICTURE Control

Use this control to soften or sharpen the VIDEO picture on the TV screen. Rotate this control until you find a desired image. This control should normally be left in it's center position.

REAR VIEW

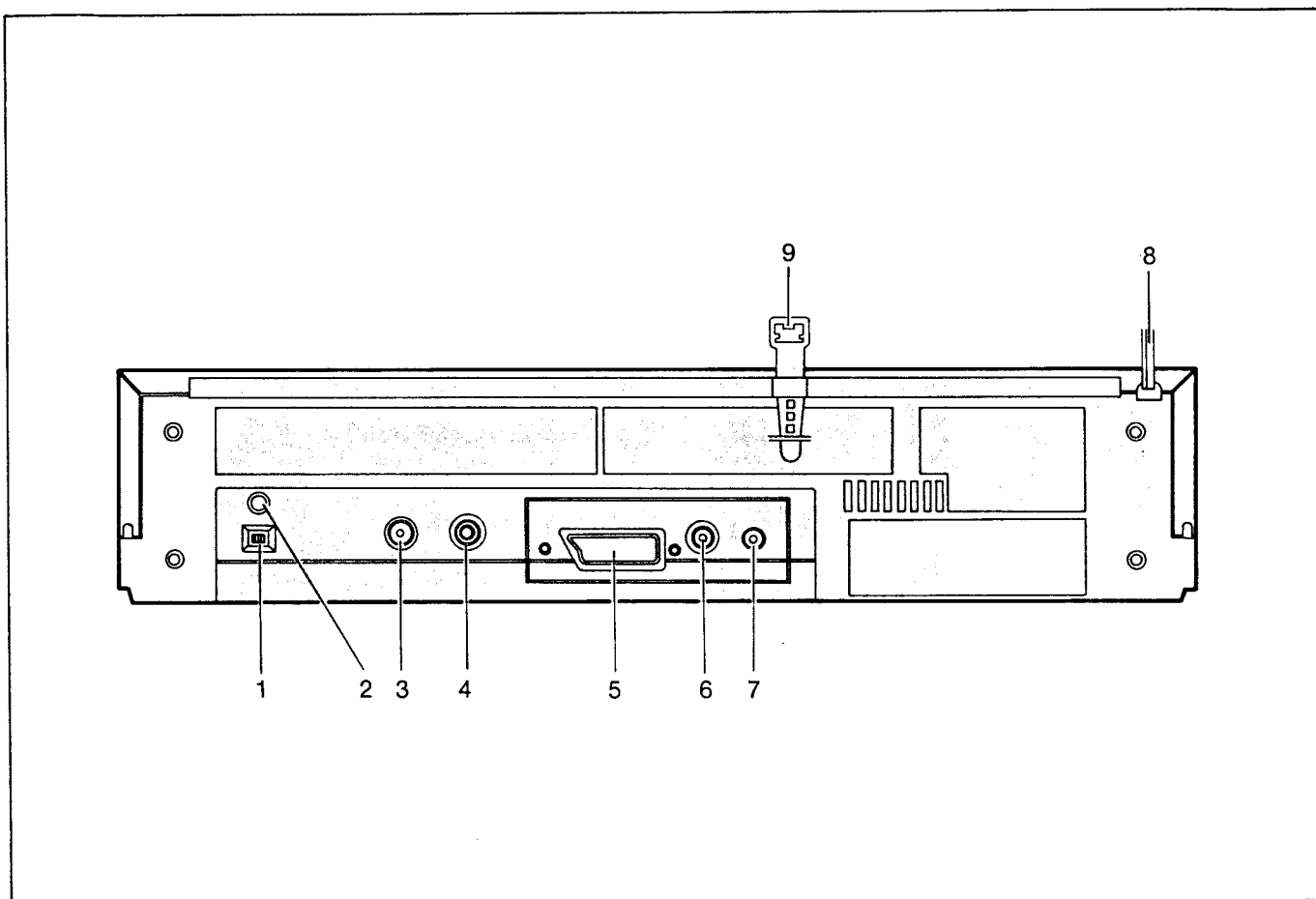


Fig. 3 REAR VIEW

1. TEST ON/OFF SWITCH

Turn this switch ON and check that the video channel of your TV set is correct. After setting, set this switch to OFF.

2. RF CHANNEL PRE-SET

In some areas the pre-set RF output of your video cassette recorder may clash with a TV broadcast. If this occurs rotate this control using a small screw-driver in a clockwise or anti-clockwise direction. A new video channel has now been set and you will need to retune your television video channel to the new RF output.

3. ANTENNA IN

Connect external antenna.

4. RF OUT

Connect to TV antenna (aerial) input.

5. SCART JACK (EUROCONNECTOR)

Connection of peripheral equipment (example: TV, VCR)

6. VIDEO IN CONNECTOR

Input jack for another VCR, portable video camera, or other video equipment.

7. AUDIO IN CONNECTOR

For connecting on audio cable from a component AUDIO system or an output signal of another VCR.

8. MAIN READ

9. WIRE CLAMPER

Use to tie a power cord when the VCR is moved.

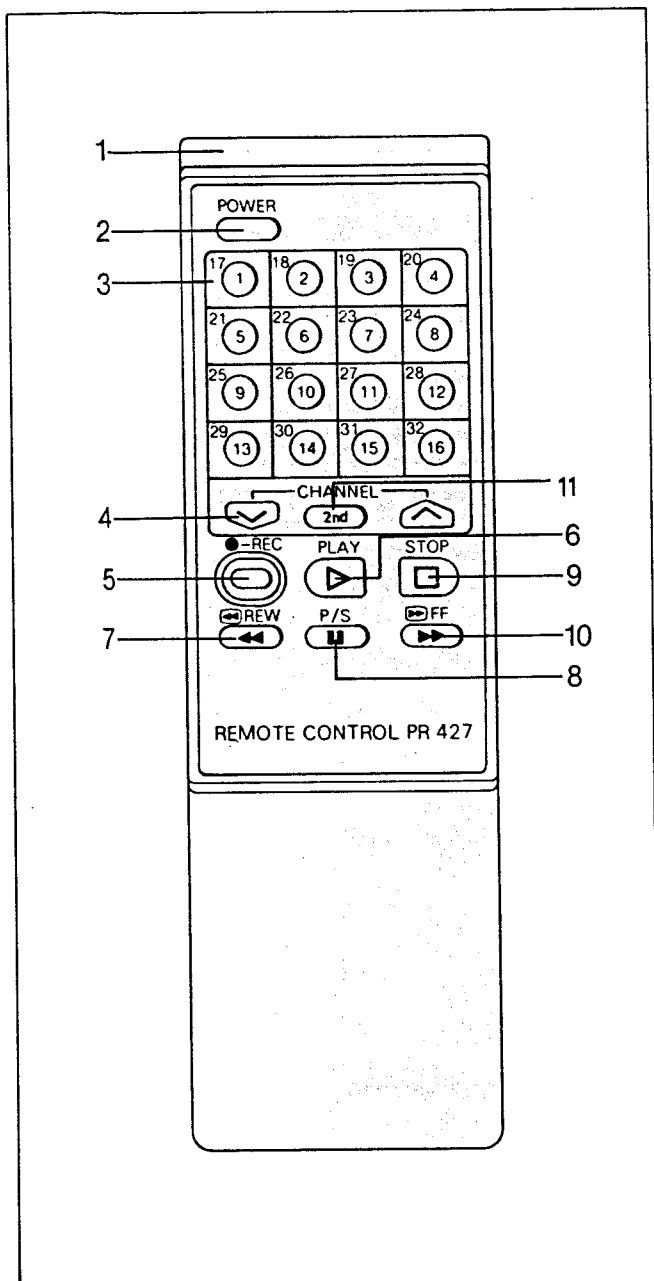


Fig. 4 REMOTE CONTROLLER

REMOTE CONTROLLER

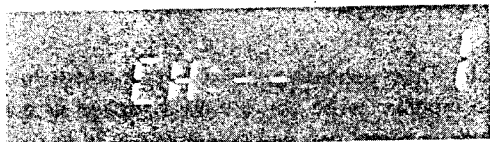
- 1. Signal Transmission Window**
Transmits signals from the remote control to the VCR.
- 2. POWER Button**
Press to turn VCR power on and off.
- 3. Direct Position Select Button**
Press the position number which a desirous channel memorized.
- 4. CHANNEL UP/DOWN Buttons**
Press to change the channels.
- 5. REC (Record) Button**
Press to start recording.
- 6. PLAY Button**
Press to play prerecorded material.
- 7. REW (Rewind/Reverse Picture Search) Button**
Press to rewind the tape rapidly after either recording or playing. Also to make reverse scan program material in the PLAY mode.
- 8. P/S (PAUSE/STILL) Button**
Press to stop the picture on screen during playback or for momentary pause during recording.
- 9. STOP Button**
Press to stop recording or playing, etc.
- 10. FF (Fast Forward/Forward Picture Search) Button**
Press to move the tape forward rapidly. Press to make forward scan the program material in the PLAY mode.
- 11. Second Channel Button.**
Press to select position number 17 to 32.

TUNING TV PROGRAMMES

There are two possibilities for tuning television programmes to your SAMSUNG VCR—AUTOMATICALLY or MANUALLY.

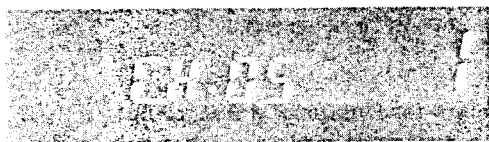
Automatic Tuning

1. Switch on the video recorder by pressing the POWER button.
2. Press PRESET button, then "CH:--1" will appear in the display window.



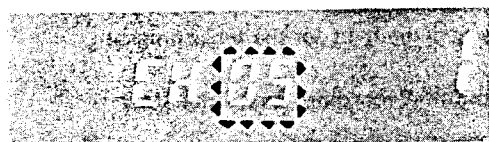
3. Press SEARCH button, then the display will change as the automatic search system scans the television channels available.

On reception of a TV channel with sufficient signal strength the automatic search will stop. (Example: CH 05 is available).

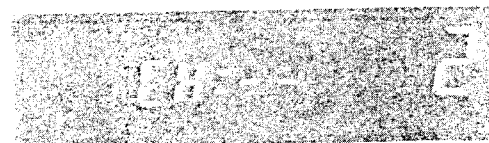


4. If the picture quality is poor, press MFT+ or MFT- button, then the channel number in the display will start to flash quickly.

If the picture quality of the signal is good, press STORE button to open the tuner memory.



5. If the number 05 is the channel number you wish to store, simply press the STORE button and the TV channel 05 will be stored behind Programme 1, and Programme number will increase.



6. Repeat the same procedure until you have tune and stored 32 TV channel that you wish to store in your area.
7. After all channel have been stored, you have to press the PRESET button.
8. Press AFT button for automatic fine tuning.

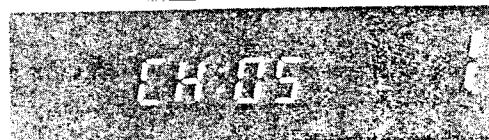
MANUAL TUNING

You may also tune the TV channel you can receive in your area by a direct input of the channel numbers. Please note that you can only use this tuning method if you know the correct channel numbers. If you are in any doubt, you should use the automatic tuning technique.

1. Press PRESET button then "CH:--1" will appear in the display window.



2. To select the channel number you need, use the CHANNEL/ PROGRAMME UP (Δ)/DOWN (V) button on the front of the VCR or remote control until the correct channel number is shown in the display.



3. Press STORE button to open the memory, then the programme number will increase automatically.



4. Repeat the same procedure until you have tuned and stored 32 TV stations that you wish to store in your area.
5. After all channel have been stored, you have to press the PRESET button.
6. Press AFT button for automatic fine tuning.

Setting of TV station is now complete.

Note

If you want to erase stored TV station in specified programm number, press the CLEAR button, then the channel number will flash one time.

And if you want to know channel number that is stored behind programme number, press STORE button. These functions are only available in PRESET mode.

Selecting TV Programmes by remote control

Press any of the button 1-16 to tune the TV channels you have programmed behind these numbers.

If the number you want is higher than 16, first press button 2nd and then press the button 17-32.

Note: When you press programme number that TV station is not stored the programme number is not appear in the display.

HOW TO SET THE CLOCK FOR PRESENT TIME OF DAY

The built-in Clock gives the time of day in a 24 hour cycle. The multifunction display is also used for the Tape Counter, or setting the Timer to record programs when you are not at home. When the electrical cord is first plugged into a wall outlet, or when there is a power failure, "SU—:—" appears on the display. The clock will work when the VCR's Power button is on. To set the clock, open the front door and follow these steps.

EXAMPLE: PRESENT TIME OF DAY IS MONDAY, 10:15

1. When the VCR power on, the display will show as in the fig. 8.

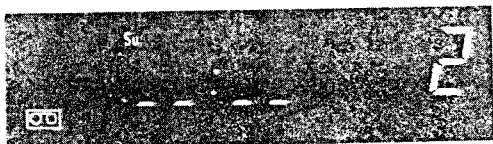


Fig. 8

2. Press the T-ADJ button. "Su 0:00" will appear on the display and flash. (Fig. 9)

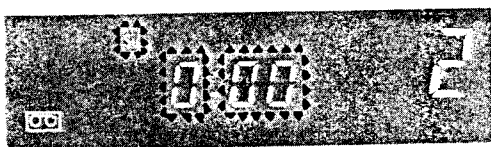


Fig. 9

3. Press the DAY button until you see "Mo" on display. Release. (Fig. 10)



Fig. 10

4. Press the "TIME+" button or "TIME—" button until you see "Mo 10:15" on display. Release. (Fig. 11)



Fig. 11

5. Press the T-ADJ button to finish time setting. (Fig. 12)

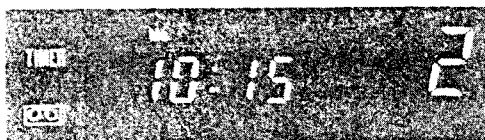


Fig. 12

UNATTENDED (TIMER) RECORDING-WHILE YOU ARE AWAY

Automatic Timer recording makes it convenient for you to record a program while you are away, asleep or busy. The Timer can be preset two weeks in advance to record four of your favorite TV programs. You can also set the Timer to automatically record a program everyday for a week or two weeks at the same time over the full length of a cassette tape. If the tape runs out, the cassette will be ejected automatically. For unattended recording the Timer needs to know what day to make the recording, the time to start, the time to stop and the channel to be recorded.

To Prepare for Unattended Recording:

1. Turn on your VCR and TV set.
 2. Make sure that the Clock shows the Present time of day.
 3. Select TV input with INPUT Select Switch.
 4. Insert video cassette with a safety tab intact.
- You are now ready to set the timer program.

Unattended Recording One Time Only:

EXAMPLE: The present time of day is Monday, 11:30 and you want to set the Timer to record a TV program this Wednesday, to start at 8:30 and to stop at 10:00 on Channel 8.

To set the START time:

1. Press the T-PGM/CHECK button to set "ON" time.



Fig. 13

2. Press PROG/CHECK button. Program number (1-4) can be selected by each push of this button.



Fig. 14

3. Press DAY button to "We". If a day in the second week is selected, "NEXT" will appear.

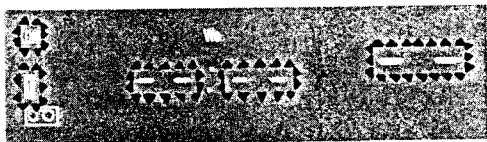


Fig. 15

4. Press "TIME+", or "TIME-" button to "8:30".

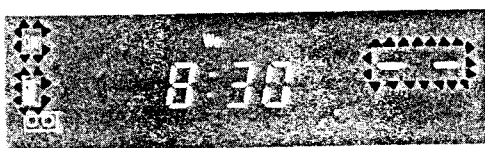


Fig. 16

5. Press CH UP/DOWN buttons for the channel you wish to record. That channel number will be shown in the multi function display.

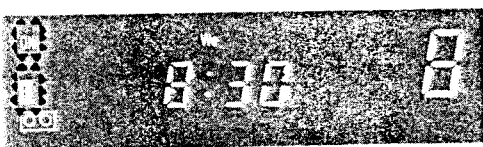


Fig. 17

To set the STOP time:

6. Press T-PGM/CHECK button to set "OFF" time.

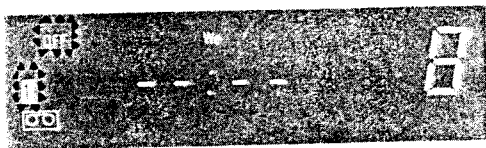


Fig. 18

7. Press "TIME +" or "TIME -" button to "10:00".

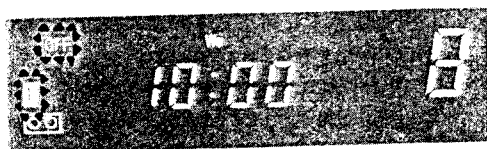


Fig. 19

8. Press T-PGM/CHECK button to finish program setting.

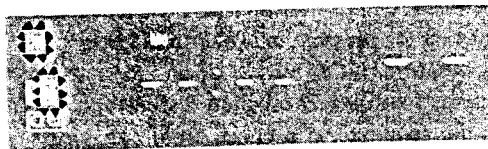


Fig. 20

NOTE: If OFF time is set before ON time, the DAY of ON time automatically changes to the previous day.

9. Press TIMER button ON for Timer recording. All indicators light will be off. (Except TIMER, program number and present time will light.)

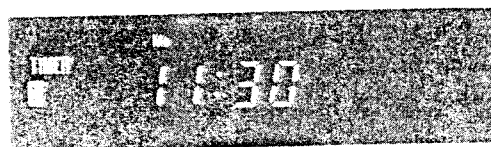


Fig. 21

Unattended Recording Daily:

If you wish to record a daily program (from 8:30 to 10:00, everyday), Press DAY button until all the Day-indicators (Su, Mo, Tu, We, Th, Fr, Sa) light. Then follow steps 4 through 9. VCR will record everyday at the same set-time for the set length of time until cassette is finished.



Fig. 22

Note on Unattended Recording

Set up TIMER information in the order that best suits your needs. If you wish to stop the Timer recording without cancelling the Timer setting, Press POWER button ON. To continue the Timer recording again, press TIMER button ON. you do not need to press the REC button for Timer recording. Before pressing the TIMER button ON, you should check the cassette to prevent the unwanted recording. If the Timer recording is set and power is OFF, VCR will be in stand-by mode to record until the start time and record for the reserved time. Be sure that the safety tab is intact on the cassette. If the tab is missing, the tape will be automatically ejected when the TIMER button is pressed for Timer recording. The TV does not have to be turned on when Timer recordings are taking place.

To Check Programming:

1. Be sure that POWER button is on.
2. Press T-PGM/CHECK button, then the recording Start time of first (1) program is shown on display.

3. Press T-PGM/CHECK button again, then the recording End time of first (1) program is shown on display.
4. Press T-PGM/CHECK button again, then the recording Start time of second (2) program is shown on display. And follow the same steps to check other programs.

NOTE: You can review the next program immediately by pressing the T-PGM/CHECK button.

It is possible to check the Timer programming when a recording is taking place.

To Clear the Program:

1. Press POWER button ON.
2. Press T-PGM/CHECK button. When the recording time is shown on display, press the RESET button to cancel the program.

Program Memory Back-Up:

Operates when there has been a power failure of up to approximately 20 seconds.

If power has been off for more than 20 seconds, it will be necessary to set the time of day and to input all new programming.

One Touch Recording (OTR) Procedure

The One Touch Recording (OTR) button allow you to start a impromptu recordings at any time. Just select the channel and press the OTR button to desired amount of recording time with automatic power off at the preselected time.
(minutes increased by each push)

To use One Touch record, first set up your VCR unit for basic recording:

1. Turn on TV and select a desirous channel.
2. Select TV input with INPUT SELECT SWITCH.
3. Insert a cassette tape with record safety tab intact, then turn POWER on automatically.

And, press "OTR" button to start recording and to select the recording length.

Then the VCR will start to record immediately and turn off at the preselected time. The "TIMER" and "REC;" indicator will appear on the multifunction display at the same time when you press the OTR button.

The OTR set time will change by pressing OTR button only as shown in the diagram below.

Number of presses of OTR button	The End of OTR time on display
1	Present time+30 min.
2	Present time+60 min.
3	Present time+90 min.
4	Present time+120 min.
.	.
.	.
.	.
K	Present time+30·K min. (until maximum tape length)

After the OTR time is set, the display shows the recording end time for 5 seconds. And the display will return to the present time and show the present time during the One Touch Recording.

To check the OTR time:

While operating OTR, if you want to check the time remaining, press "TIME+" or "TIME-" button. Then the End time of OTR will appear on display for 5 seconds only. And after that, the display will return to the present time. In this case, be careful that the end time shows not the original end time, but the time increased or decreased about 1 minute.

To change the OTR time:

The recording length can be changed during OTR by pressing "OTR", "TIME", or "TIME-" button. The "OTR" button can increase the length by 30 minutes, and "TIME+" or "TIME-" button can increase or decrease the length by 1 minute.

To cancel the One Touch Recording:

If you wish to cancel the One Touch Recording, press the POWER button to OFF.

Then the "TIMER" and "REC" indicator will disappear on the multifunction display.

Note on One Touch Recording:

If the present time of day is not preset, OTR function does not operate.

If you use the cassette with the record safety tab removed, OTR will not operate because the VCR will eject the cassette when you press the OTR button.

The Timer Recording cannot begin recording if the VCR is already recording with OTR, and vice versa. But after the OTR, it will then start Timer Recording immediately if the end time of OTR is set before the one of Timer recording.

At the end of recording, the VCR will automatically turn off and the present time of day will be displayed.

Remember the maximum recording time without changing a cassette varies with the type of cassette tape you use.

1-3. CLEANING AND LUBRICATION

CLEANING TAPE MECHANISM

Periodic cleaning is necessary to insure continued excellent performance of the tape mechanism. To clean the following parts use "Kim Wipes" and solvent.

1. Capstan shaft.
2. All idler wheels.
3. All tape guide posts.
4. Supply and take-up reels.
5. Impedance roller.
6. Pinch roller.
7. Idler belt.
8. Capstan belt.
9. Capstan motor pulley.
10. Loading belt
11. Loading motor pulley
12. Loading pulley.

To clean video heads, full erase head, and audio/control (A/C) head use only head cleaning kit and solvent.

Note: When cleaning video heads move the cleaning stick in the direction of head rotation. Wiping in a vertical motion may damage the heads.

LUBRICATION TAPE MECHANISM

The tape transport mechanism is properly lubricated at the factory. In normal use cycles, and with average environmental conditions, additional lubrication should not be required during the first year of operation.

Depending on use and environmental conditions, periodic lubrication may be required. When relubricating, remove old lubricant first, then sparingly apply new lubricant. (Excessive lubricant may be transferred to other assemblies causing multifunction).

Use grease on the following parts after 1,000 hours operation. (See exploded view for location.)

1. Between base pole (L) assembly and mecha chassis assembly.
2. Between level review cam and mecha chassis assembly.
3. Between base pole (R) assembly and mecha chassis assembly.
4. Between plate main slide and mecha chassis assembly.
5. Between I.B slide assembly and plate main slide.
6. Between gear loading (L) and gear loading (R).
7. Between main gear, eject gear and worm.
8. A part of flywheel shaft contacted to the Bracket Capstan Flywheel.

Oil may be required for the following parts every 1,000 hours operation. (See exploded view for location.)

1. Supply reel and take-up reel shafts.
2. Links of both loading arms.
3. Between shaft of tension arm and chassis.
4. Pressure roller arm.
5. Shaft of load pulley.

Other parts which are not listed above do not require lubrication, except if a part is replaced. Use appropriate oil or grease as indicated on exploded view.

1-4. ABBREVIATIONS

	2X 4.43 MHz	Double Color Sub Carrier	D	D.FG D.M.M D.O D.O.C D.PG D/A D/C D/W DAFC DAPC DE-EMPH DEM DET DEV DL DLIM DLYD DM DN	Drum Frequency Generator Delayed Monostable Multivibrator Drop Out Drop Out Compensator Drum Pulse Generator Digital-to-Analog Dark/Clip Dark/White Drum Auto Frequency Control Drum Auto Phase Control De-Emphasis Demodulator Detector Deviation Delay Line Double Limiter Delayed Drum Motor Down
A	ACC ACK ADD AFC AFT AGC AL ALC AMP APC AUD AUX	Automatic Color Carrier Automatic Color Killer Adder Automatic Frequency Control Automatic Fine Tuning Automatic Gain Control Always Automatic Level Control Amplifier Automatic Phase Control Audio Auxiliary			
B	BATT BE BD BG BH BL BM BPF	Battery Burst Emphasis Burst De-Emphasis Burst Gate Power Supply for Selecting VHF High Band Power Supply for Selecting VHF Low Band Power Supply for Selecting VHF Mid Band Band Pass Filter	E	E-E EMPH ENV. EQ EXT	Electronic-to-Electronic Emphasis Envelope Equalizer External
C	C. FG C. FREE RUN C. MEMORY C. SYNC C. RESET C. REVERSE C/R CAFC CAPC CATV CAR CB CAP CCD CH CHAR. CHROMA CM CNT COM COMP. COMPE CON CONV CST C-EMP C-ERR	Capstan Frequency Generator Capstan Free Run Counter Memory Composite Sync Counter Reset Counter Reverse Condenser/Resistor Capstan Auto Frequency Control Capstan Auto Phase Control Cable TV Carrier Carrier Balance Capstan Charge Coupled Devices Channel Character Chrominance Capstan Motor Counter Common Comparator Compensator Control Converter Cassette Current Emphasis Capstan Error	F	F-V F.FWD FB FH FG FM FSC FWD	Frequency-to-Voltage Converter Fast Forward Feed Back Horizontal Frequency Frequency Generator Frequency Modulator Sub Carrier Frequency Forward
			G	GEN GND	Generator Ground
			H	HPF HSS	High Pass Filter Horizontal Sync Separator
			I	I/O IF INJ IR	Input/Output Intermediate Frequency Injector Infrared
			L	L/C LED LIM LPF LS LUMA	Luminance/Chrominance Light Emitting Diode Limiter Low Pass Filter Latch Strobe Luminance
			M	M.C MIX MM MFT MOD	Main Converter Mixer Monostable Multivibrator Manual Fine Tuning Modulator

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			M	M.C MIX MM MFT MOD	Main Converter Mixer Monostable Multivibrator Manual Fine Tuning Modulator

N	NR	Noise Reduction	T	T. REEL	Take-up Reel Sensor
	N.C	No Change		T. RESET	Timer Reset
O	OSC	Oscillator	U	TP	Test Point
	OTR	One Touch Recording		TRK	Tracking
P	PB	Play Back	V	U/D	Up/Down
	PC	Power Control		UL	Unloading
	PG	Pulse Generator		UPS	Unloading Play Still
	PIF	Picture Intermediate Frequency		V-REF	Voltage Reference
	PL	Preloading	W	V-SYNC	Vertical Sync
	PLL	Phase Lo Loop		VCO	Voltage Controlled Oscillator
	PLS	Pulse		VCR	Video Cassette Recorder
	PRG	Program		VIF	Video Intermediate Frequency
	PS	Phase Shift		VSS	Vertical Sync Separator
	PWM	Pulse Width Modulation		VHS	Video Home System
	PWR	Power		VP	Voltage Controlled Crystal Oscillator
	P/R	Playback/Record		VXO	
	P/S	Pause/Still		W/C	White/Clip
				W/D	White/Dark
				X	Express Recording
				μP	Microprocessor
R	REC	Record	S		
	REC. SAF.	Record Safety			
	RECT	Rectifier			
	REF	Reference			
	REG	Regulator			
	REV	Reverse			
	REW	Rewind			
	RF	Radio Frequency			
S	S/H	Sample and Hold			
	SC	Sub Converter			
	SIF	Sound Intermediate Frequency			
	SEP	Separator			
	SP	Standard Play			
	SRCH	Search			
	SRV	Servo			
	SW 25Hz	Head Switching Pulse			
	SYNC	Synchronizing Signal			
	SYSCON	System Control			

2. DISASSEMBLY

2-1. INSTRUMENT DISASSEMBLY

2-1-1. Top Cabinet Removal (Fig. 1)

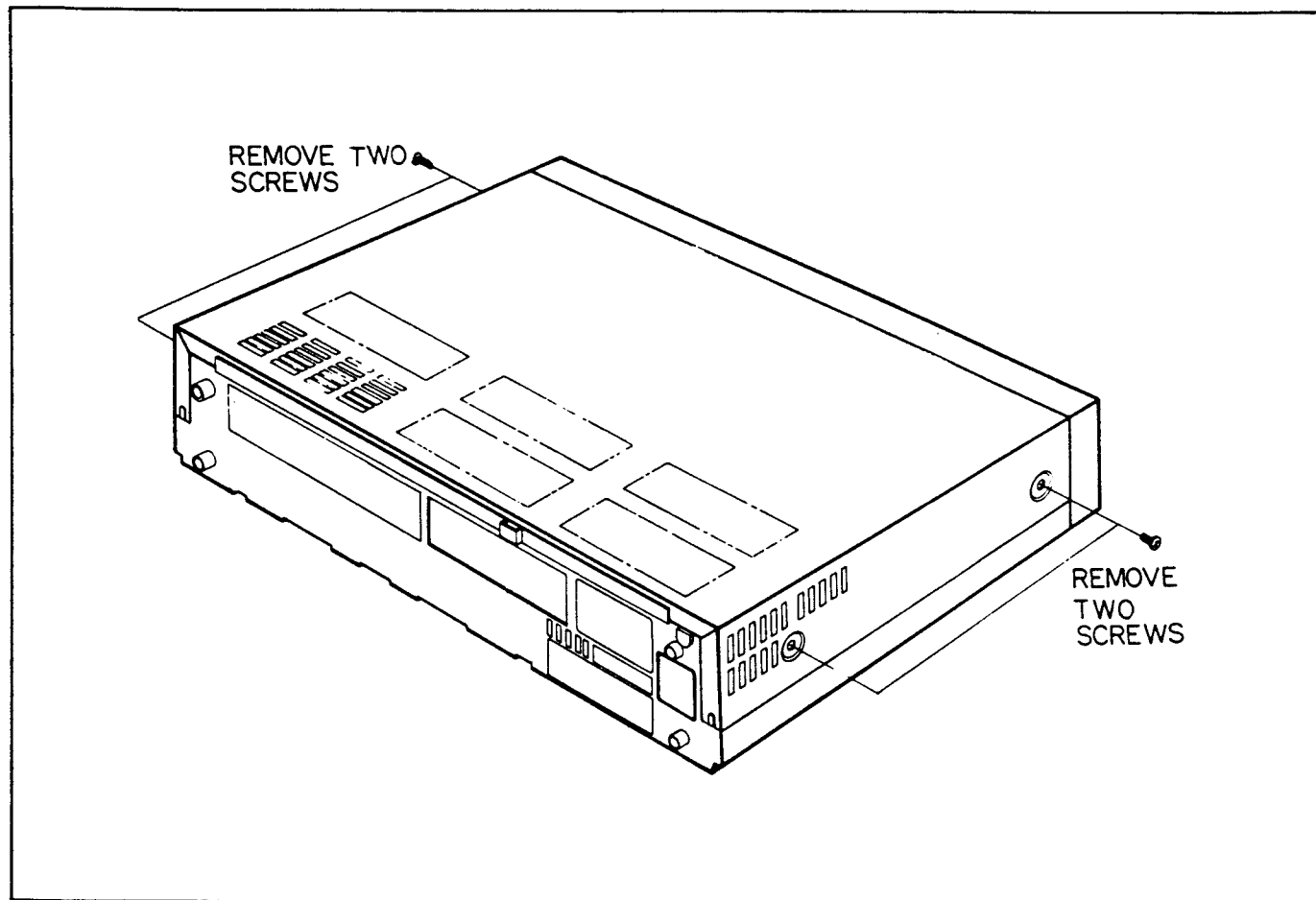


Fig. 1 Top Cabinet Removal

1. Remove four (4) screws located at the sides of the top cabinet.
2. Carefully lift the back of the top cabinet and slide it to the rear to remove.

Note: _____

2-1-2. Bottom Cover Removal (Fig. 2)

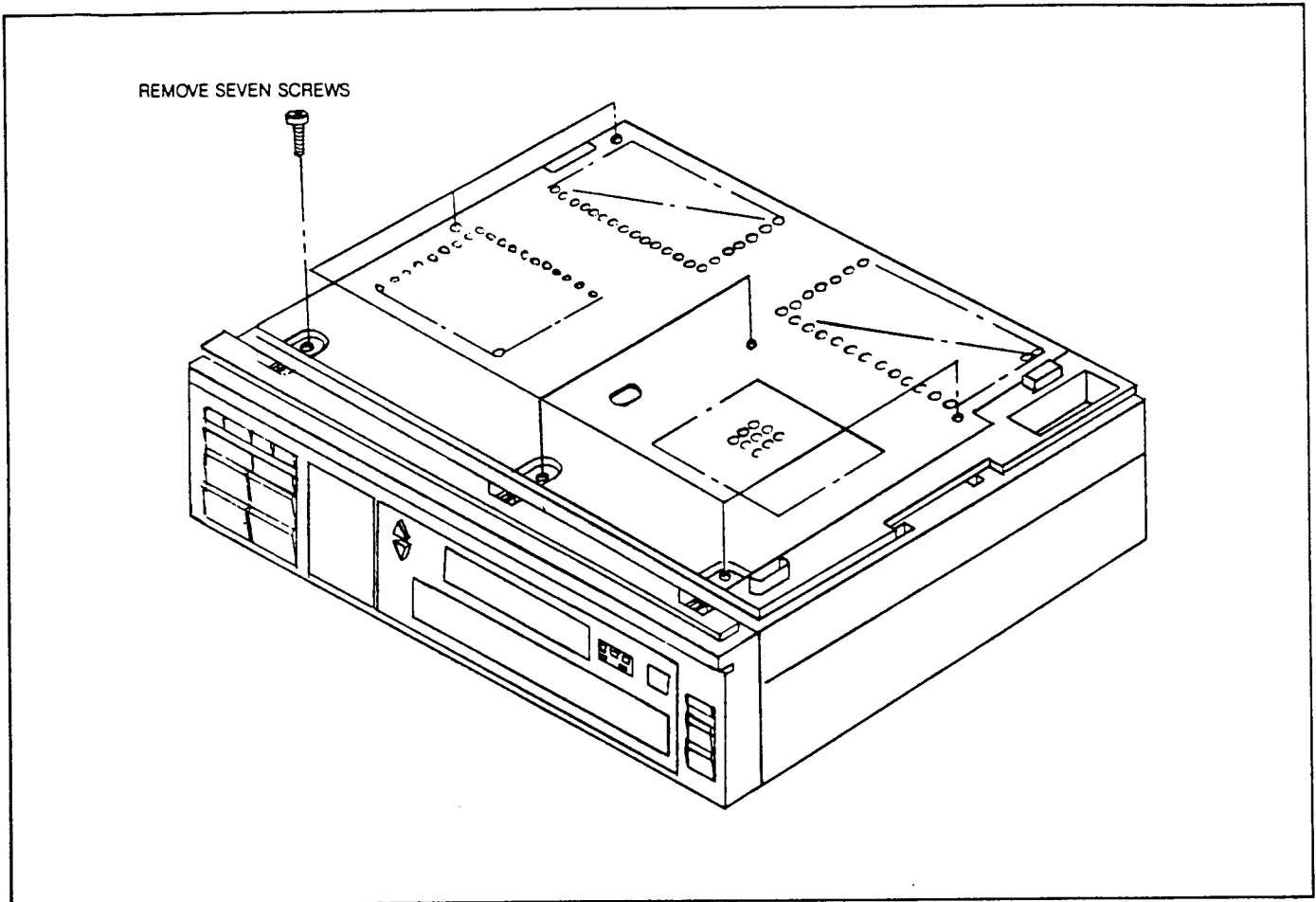


Fig. 2 Bottom Cover Removal

1. Remove seven (7) screws holding the bottom cover.

Note: _____

2-1-3. Front Panel Removal (Fig. 3)

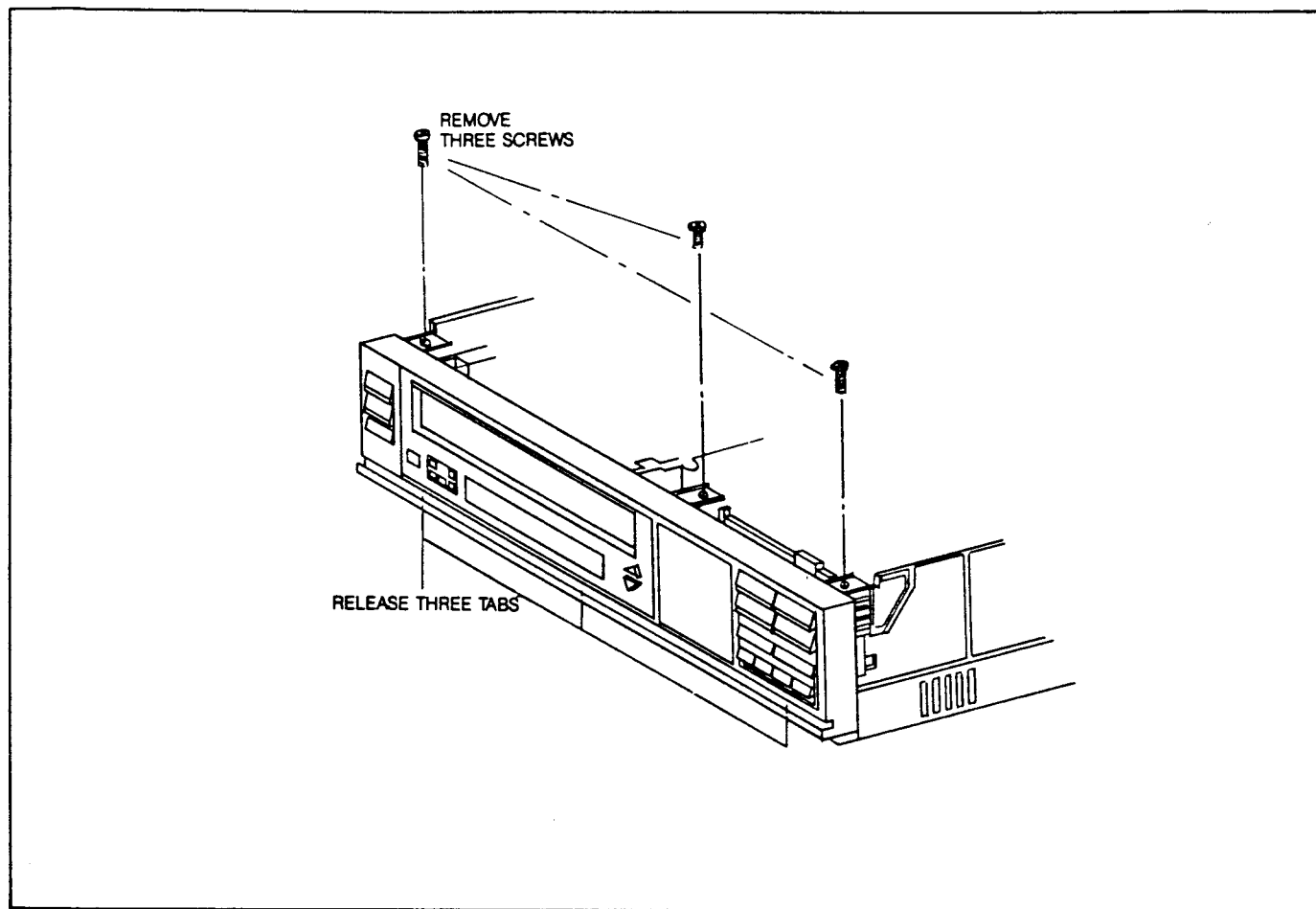


Fig. 3 Front Panel Removal

1. Remove the top cabinet and the bottom cover. (See Figs. 1, 2)
2. Remove three (3) screws from the top of the front panel.
3. Release three (3) tabs from the bottom of the front panel.
4. Tilt the front panel forward to remove.

Note: _____

2-1-4. Function Switch Circuit Board Removal (Fig. 4)

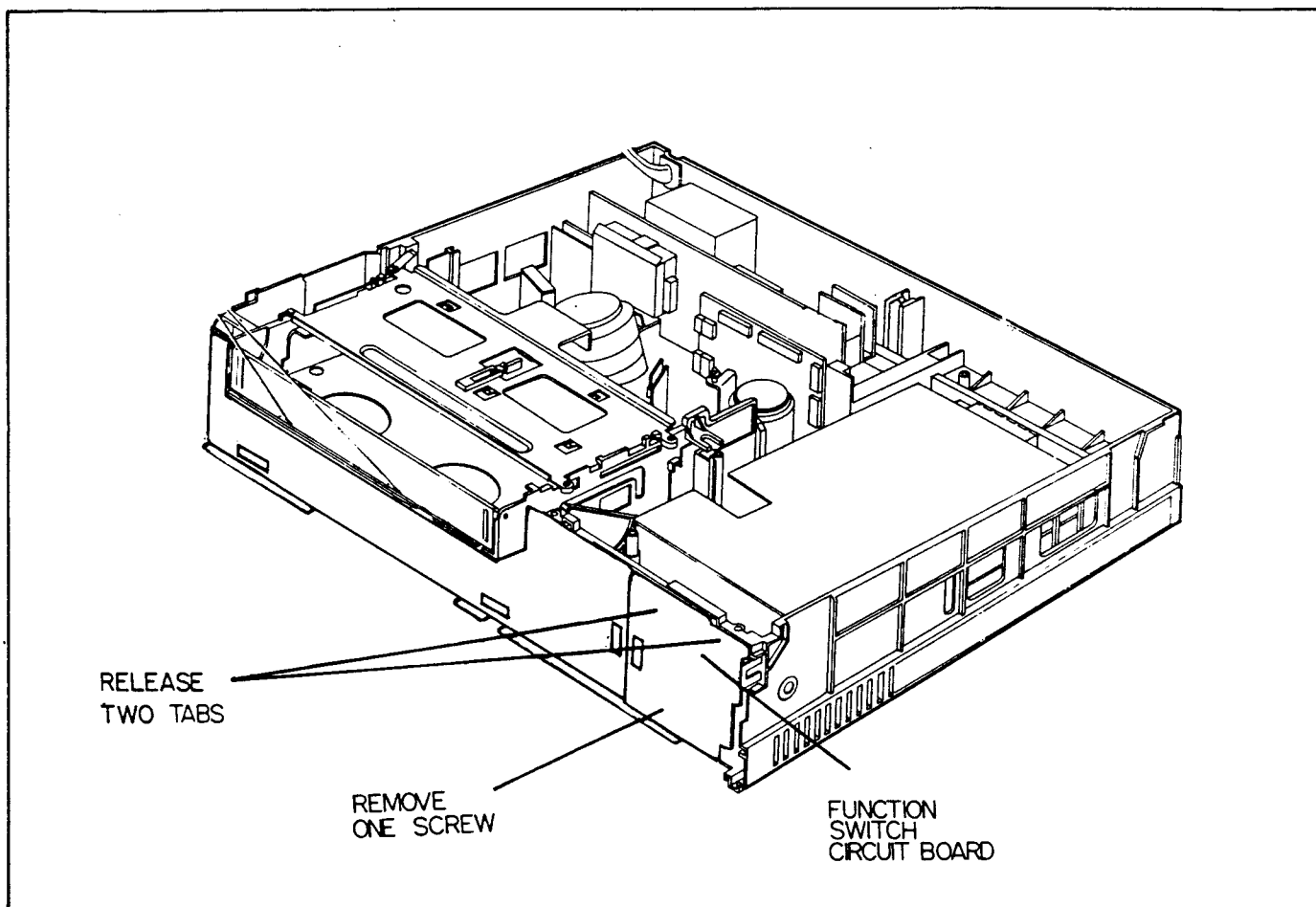


Fig. 4 Function Switch Circuit Board Removal

1. Follow the procedure for removing the Panels.
(See Figs. 1 to 3)
2. Remove one (1) screw holding the function switch circuit board.
3. Release two (2) tabs on the circuit board.
4. Disconnect one (1) connector (CN801) on this board.

Note: _____

2-1-5. Timer/Input Key Circuit Board Removal (Fig. 5)

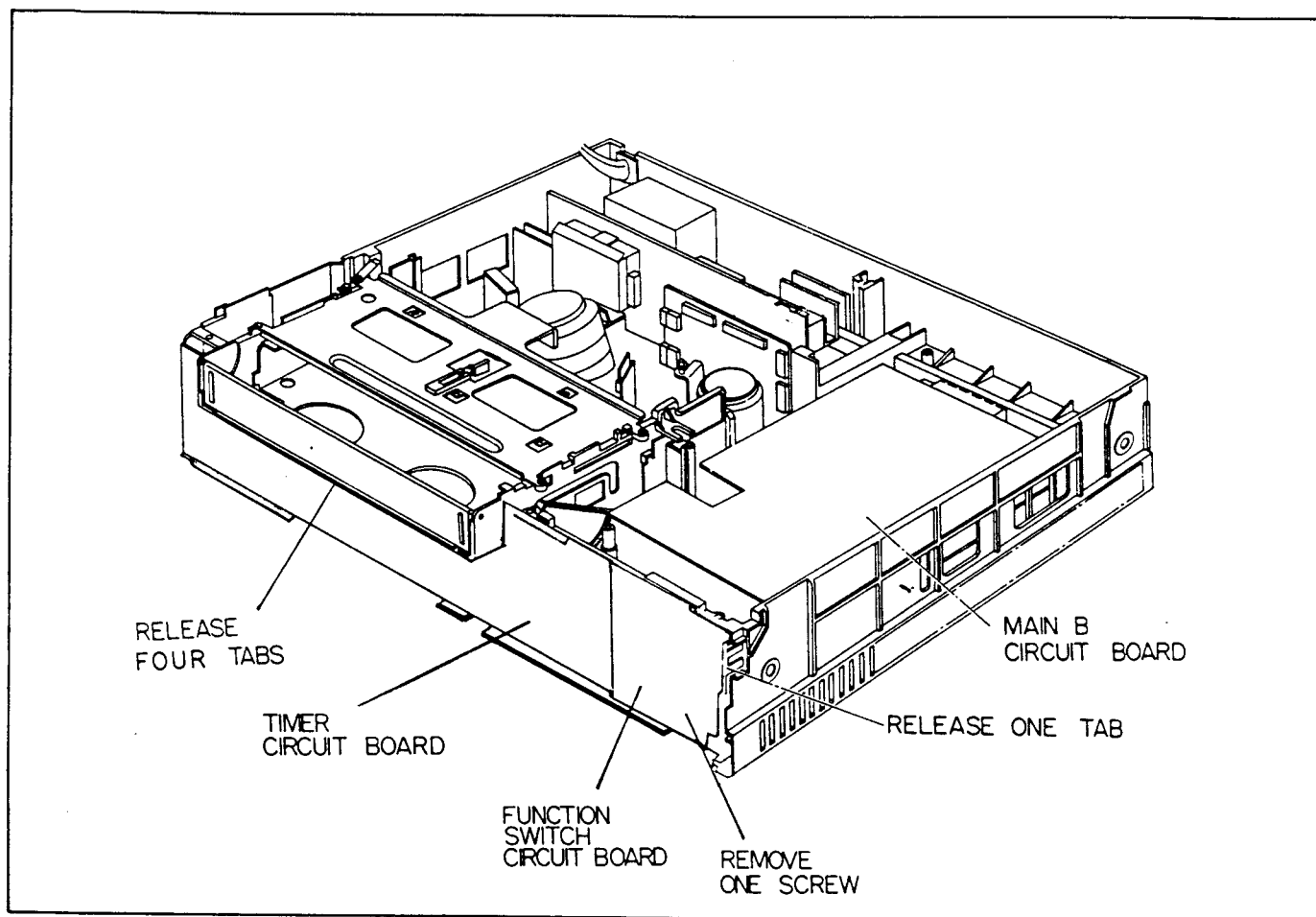


Fig. 5 Timer/Input Key Circuit Board Removal

1. Follow the procedure for removing the panels.
(See Figs. 1 to 3)
2. Remove one (1) screws holding the timer/input key circuit board.
3. Disconnect two (2) connectors (CN601), (CN203) on the main circuit board, and release four (4) tabs on the timer/input key.
3. Taking care of the cable assemblies, pull the circuit board forward to release.

Note: Before removal of the timer/input key circuit board, make sure that the function switch circuit board.

Note: _____

2-1-6. Main B Circuit Board Removal (Fig. 6)

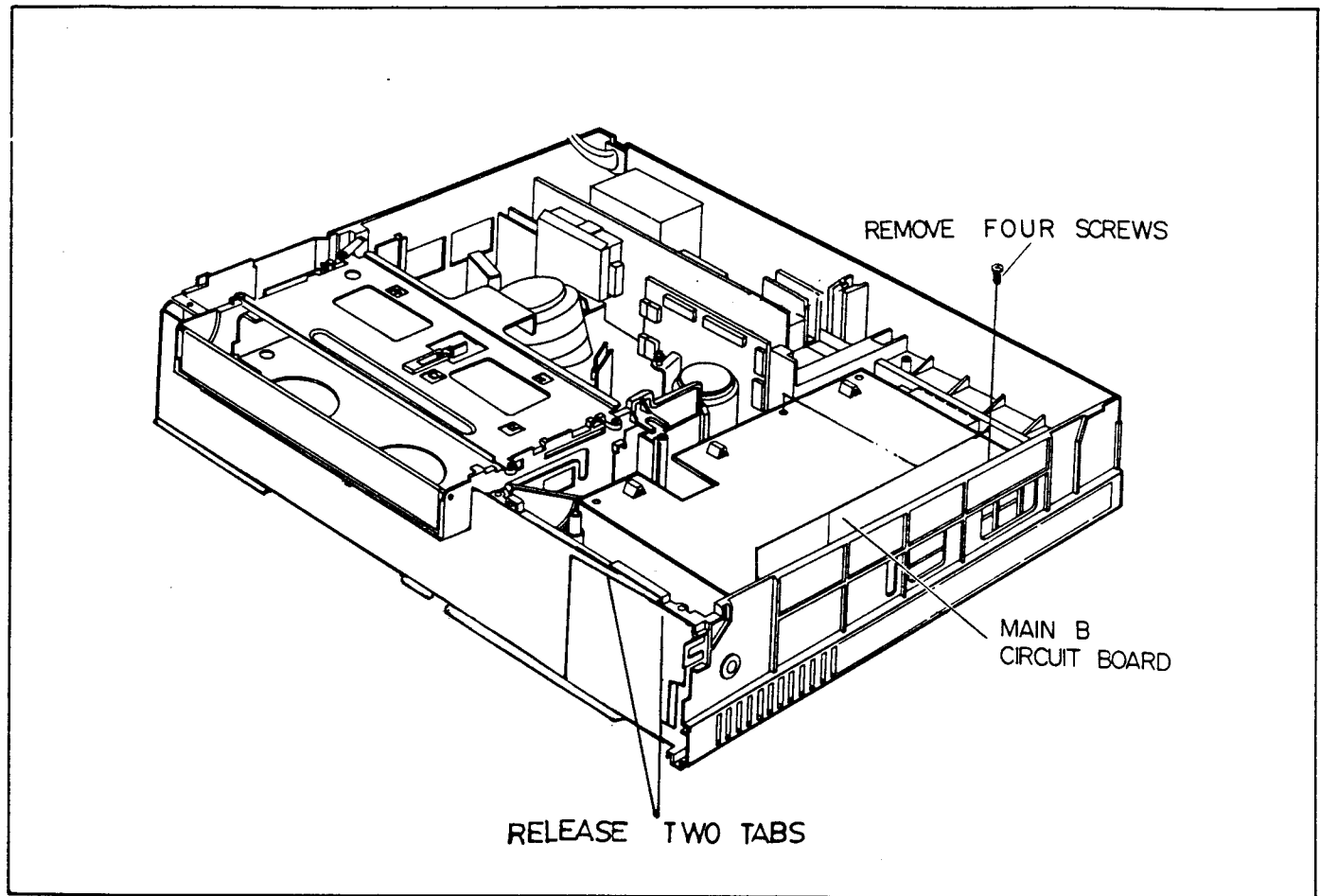


Fig. 6 Main B Circuit Board Removal

1. Follow the procedure for removing the panels.
(See Figs. 1 to 3)
2. Disconnect on (4) connector (CN301 CN303 CN304) on the Main-B board
3. Remove four (4) screws on the Main B PC Board and the hinge from the frame.
4. Pull out the board in the direction of the arrow.

Note: _____

2-1-7. Main A Circuit Board Removal (Fig. 7)

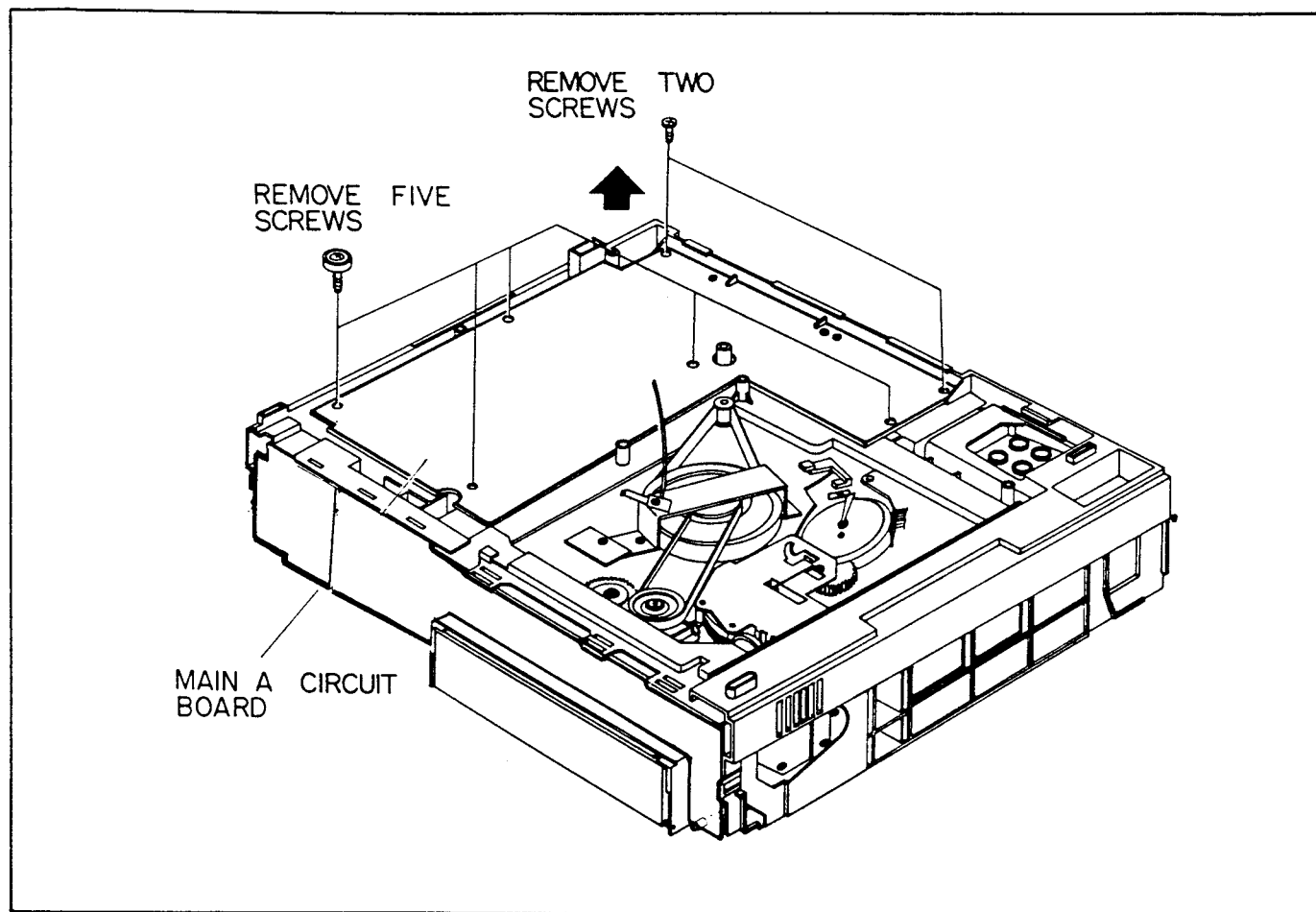


Fig. 7 Main-A Circuit Board Removal

1. Follow the procedure for removing the panels.
(See Figs. 1 to 3)
2. Disconnect eight (8) connectors between the main circuit board and the other circuit boards.
3. Remove seven (7) screws on the main board.
4. Lift up the assembly in the direction of the arrow.

Note: _____

2-1-8. Regulator Circuit Board Removal (Fig. 8)

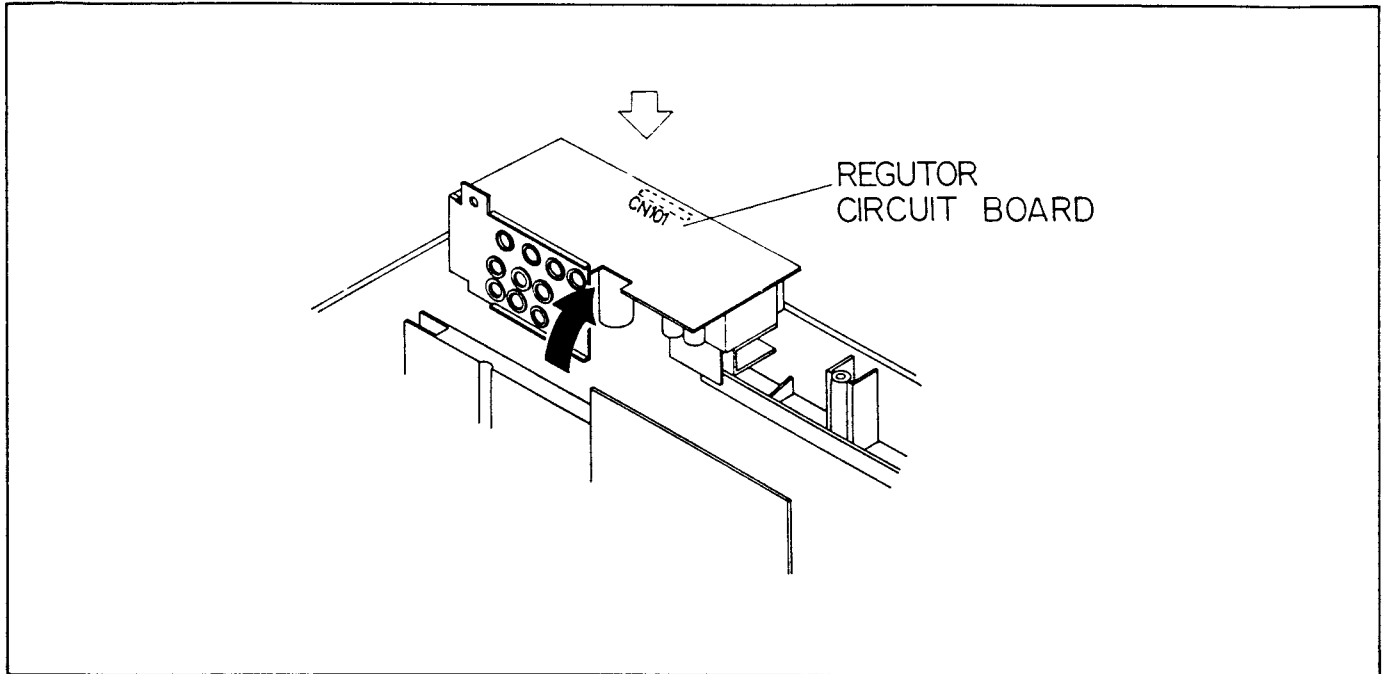


Fig. 8 Regulator Circuit Board Removal

1. Follow the procedure for removing the panels.
2. Remove three (3) screws from the frame.
3. Disconnect one (1) a connector (CN101), on the regulator circuit board.
4. Remove the IC from the Lower Drum.
5. Taking care of the cable assemblies, lift the regulator circuit board upward to release.

2-1-9. PWB-Deck Joint (G-7) Removal (Fig. 9)

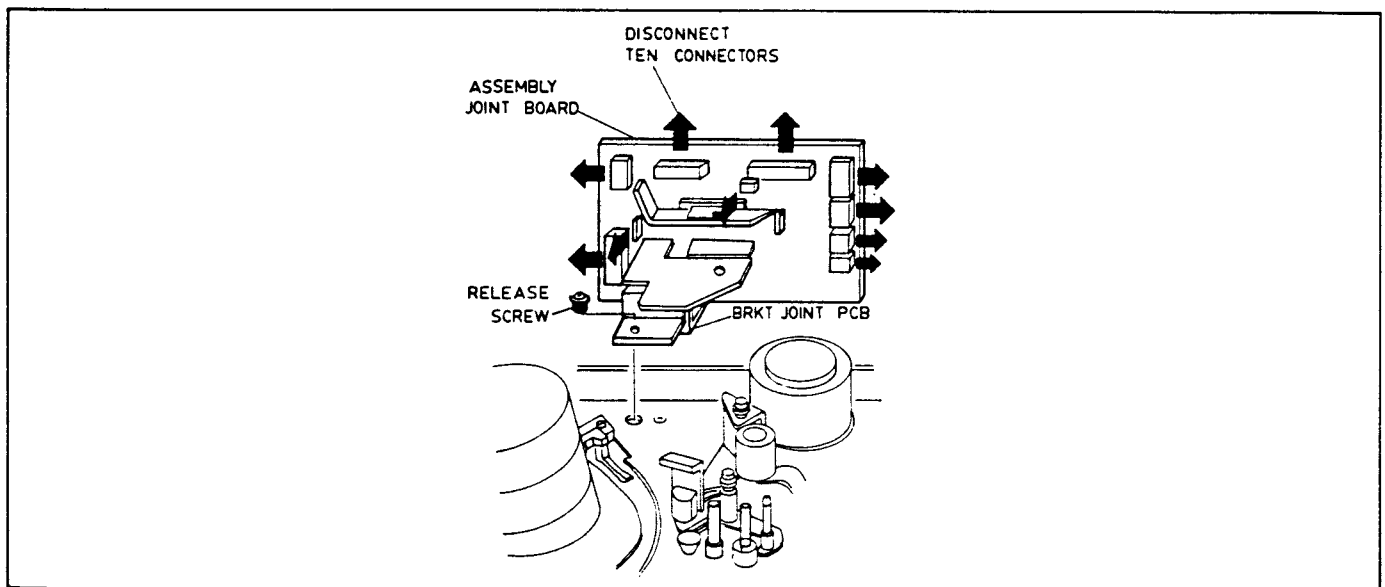


Fig. 9 Pwb-Deck Joint (G-7) Removal

1. Removal the top panel. (See Fig. 1)
2. Disconnect ten (10) connectors (Fig. 9)
3. Remove the screw holding Pwb-deck joint (G-7).

2-2. MECHANICAL DISASSEMBLY

Tape Transport Mechanism Identification.

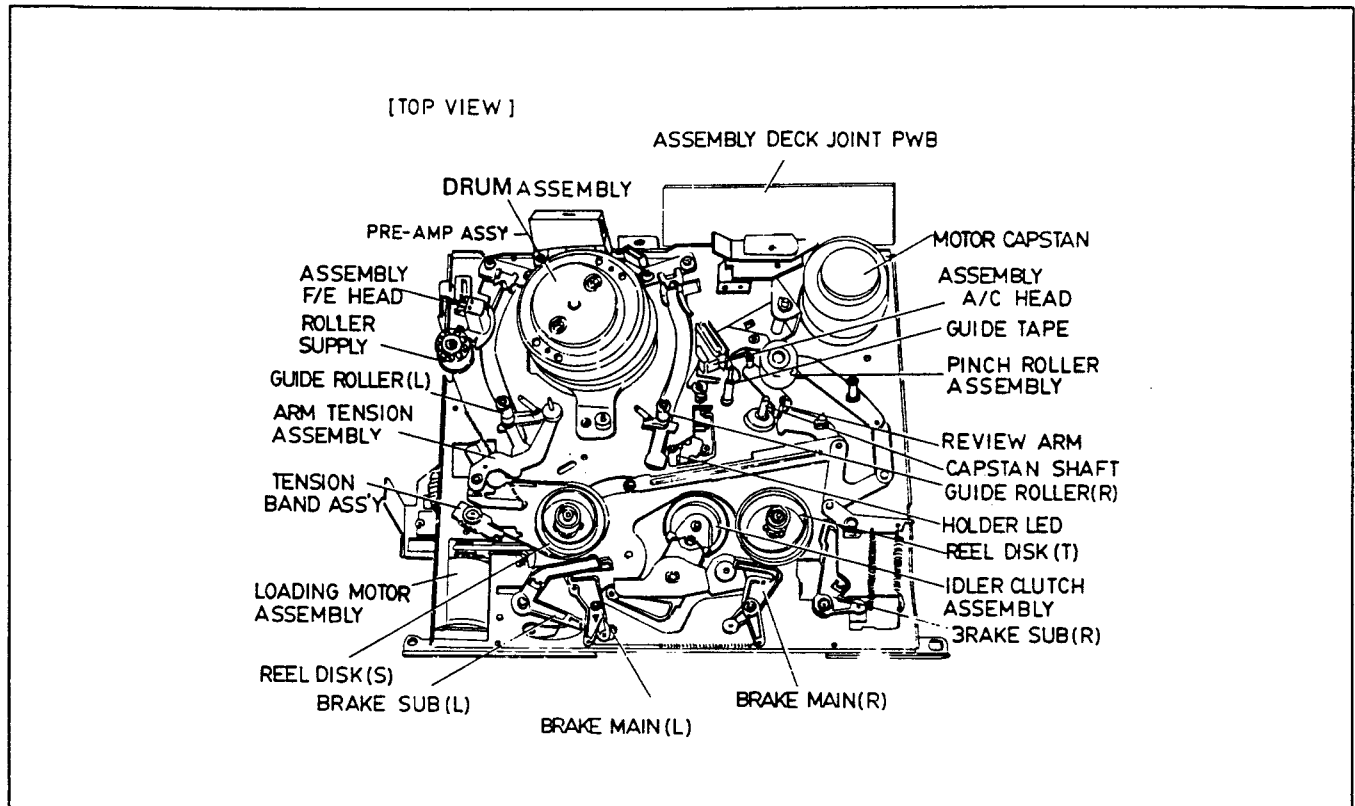


Fig. 10 Tape Transport Mechanism-Top View

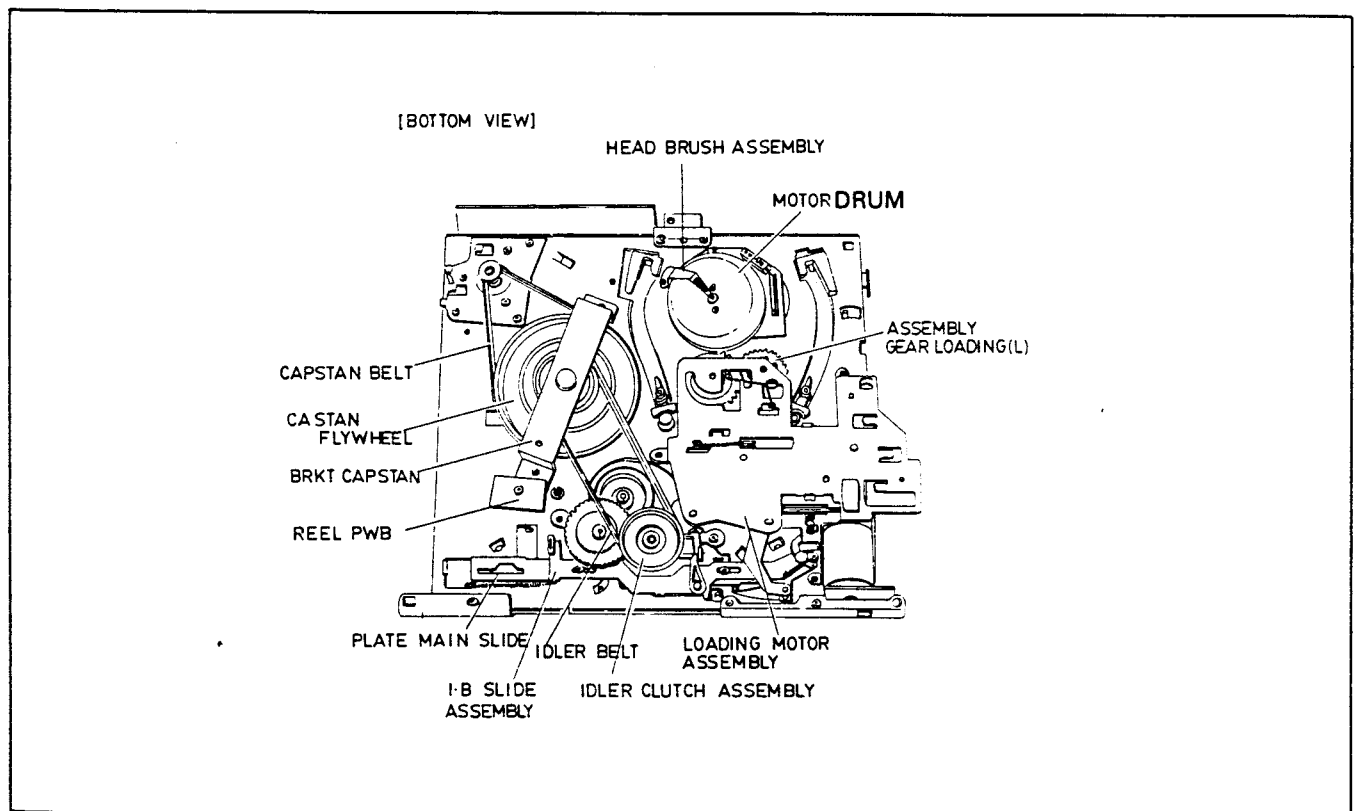


Fig. 11 Tape Transport Mechanism-Bottom View

2-2-1. Housing Assembly Removal (Fig. 12)

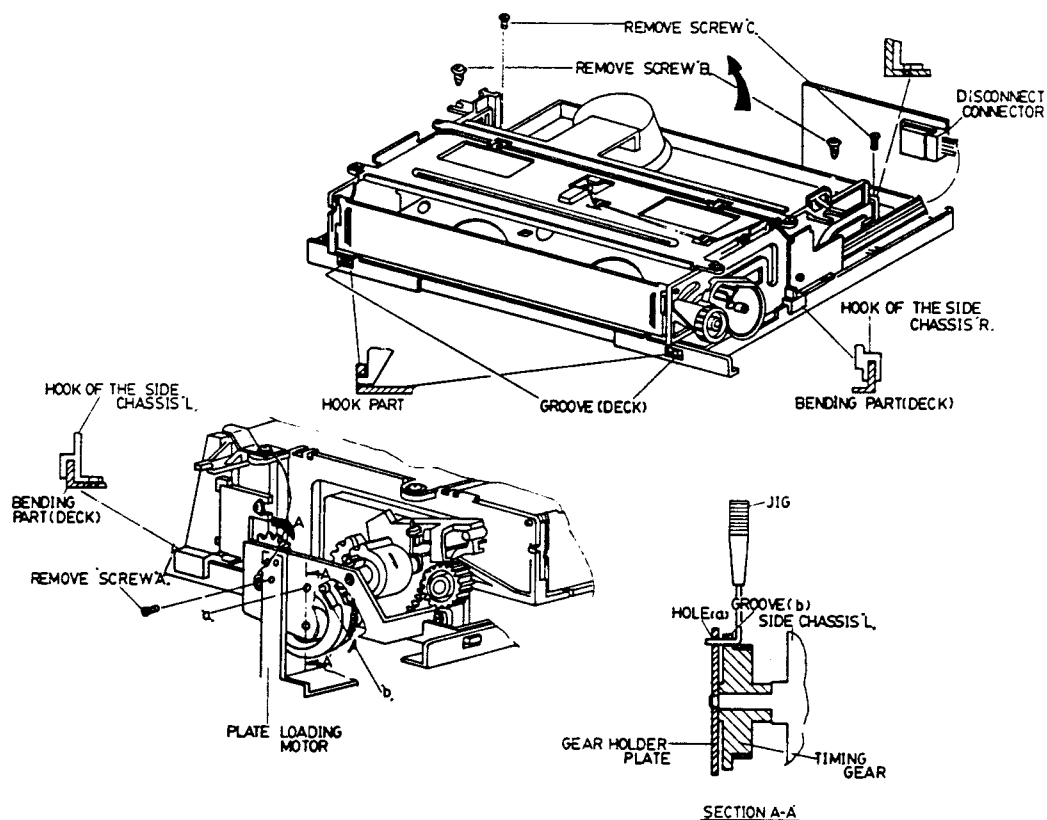


Fig. 12 Housing Assembly Removal

1. Follow the procedure for removing the panels.
(See Figs. 1 to 3)
2. Disconnect connector from pwb-deck Joint.
3. Remove the screw. (A)-Joint screw of housing and plate loading motor.
4. Remove the two screw. (B)-Joint screw of housing and frame.
5. Remove the two screw. (C)-Joint screw of housing and deck.
6. Lift the rear of the housing assembly toward arrow mark.

- Note:**
- When reinstalling housing assembly to the deck, first insert the hook part of the housing to the groove of the deck. Second fit the hook of the side chassis (R) (L) to the bending part of the deck.
 - Before jointing screws (C), fix assembling point of the timing gear and arm gear rotating the side bevel gear to the direction of arrow A
 - a) Assembling point is the point that the hole of the gear holder plate corresponds to the groove of the timing gear like the section A-A'.
 - b) If the assembly point is not correct. It does not return to the initial position completely.

2-2-2. Housing Assembly Identification (Fig. 13)

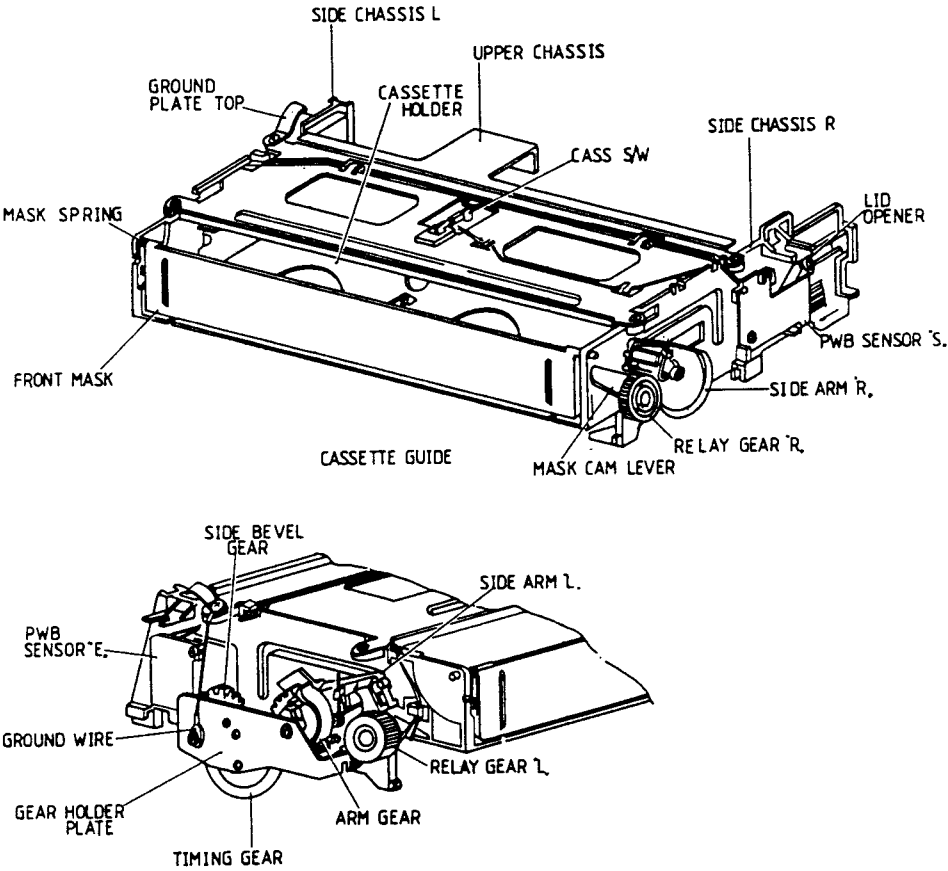


Fig. 13 Housing Assembly Identification

Note: _____

Note: _____

2-2-3. Housing Assembly Disassembly (Fig. 14 to 21)

1. Remove front mask. (Fig. 14)

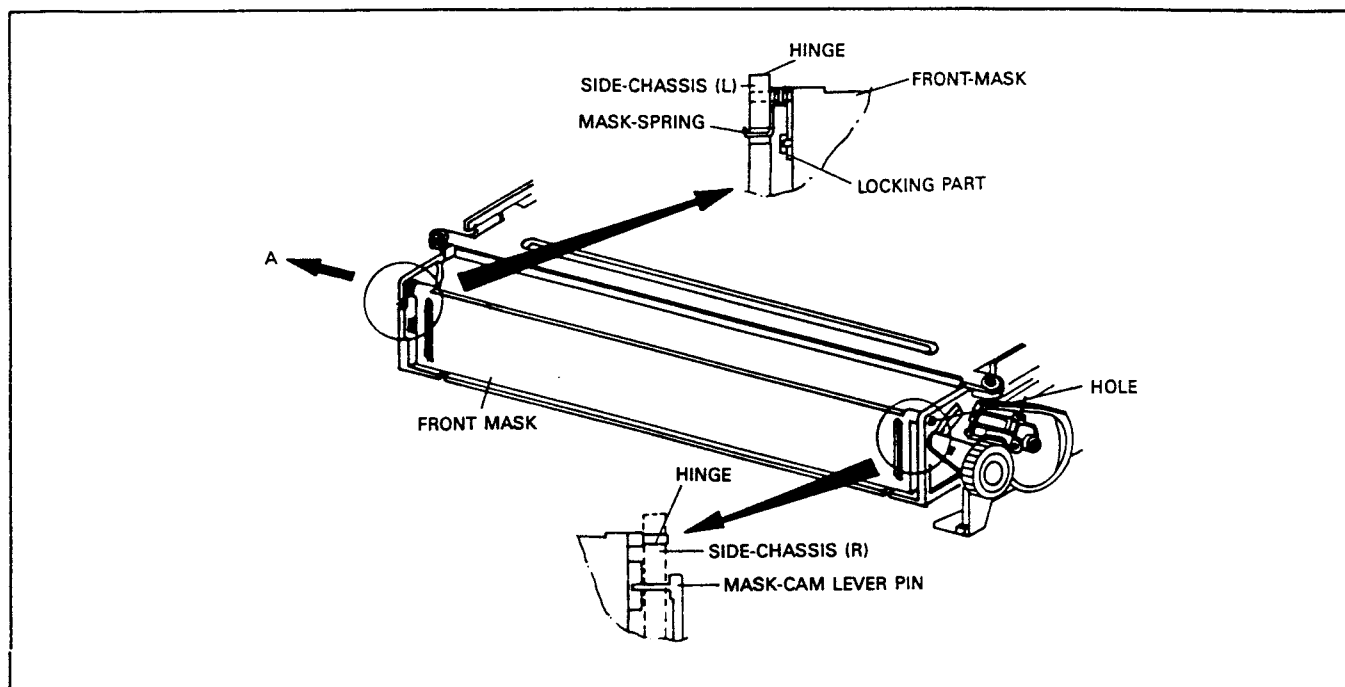


Fig. 14 Front Mask Removal

- Pulling front mask to the direction of arrow A, disintegrate a reinstalled front mask hinge part in the hole of the side-chassis (R) and disintegrate a reinstalled hinge part in the hole of the side-chassis (L) to the reverse direction.

NOTE:

- One end of the mask spring must be reinstalled at the locking part of the front mask and the other end must be reinstalled the hook part of the side chassis (L).
- Upon reinstallation of front mask slide part of right hand must be reinstalled in front of the mask cam lever pin. (Fig. 14)

2. Remove REC S/W (Fig. 15)

Disintegrate REC S/W attaching to the guide cassette.

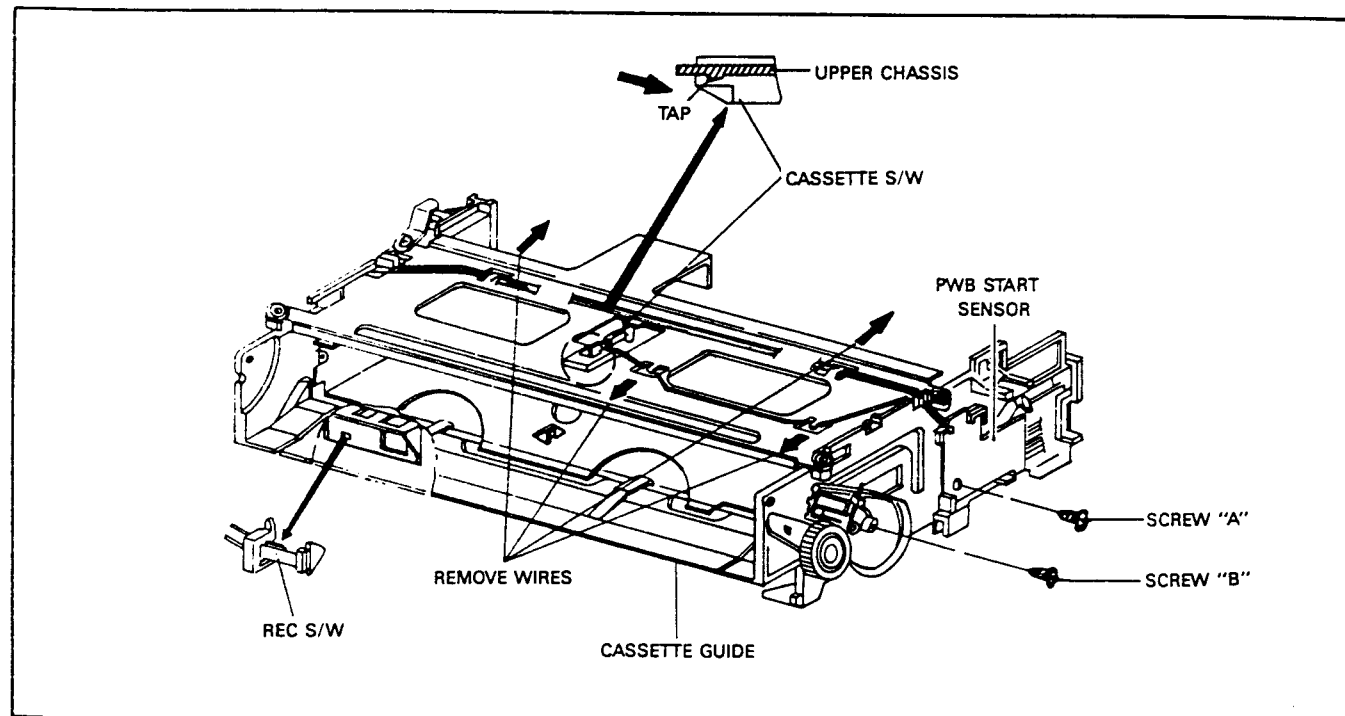


Fig. 15 Rec S/W / Cassette S/W / Pwb Start Sensor / Side Arm (R) Removal

3. Pwb end sensor remove (Fig. 16)

- After removing the screw at the side chassis (L), disintegrate PWB end sensor.

Note: Pay attention to the TR and Photo TR attached to the Pwb end sensor.

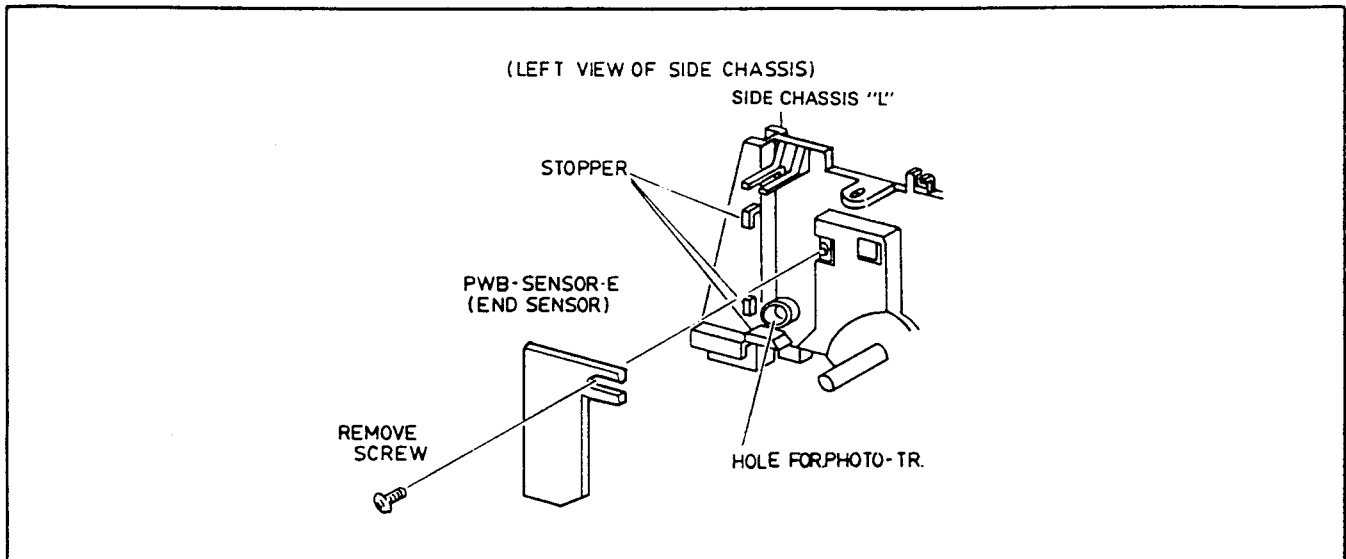


Fig. 16 Pwb End Sensor Removal

4. Release the tab of the cassette S/W and remove the cassette S/W. (Fig. 15)

5. Pwb Start sensor removal (Fig. 15)

- After removing the screw (A) at the side chassis (R), disintegrate PWB start sensor.

Note: Pay attention to the TR and Photo TR attached to the Pwb start sensor.

6. Remove the wires. (Fig. 15)

Note: Each wire is connected to Rec S/W, Pwb end sensor, cassette S/W and Pwb start sensor.

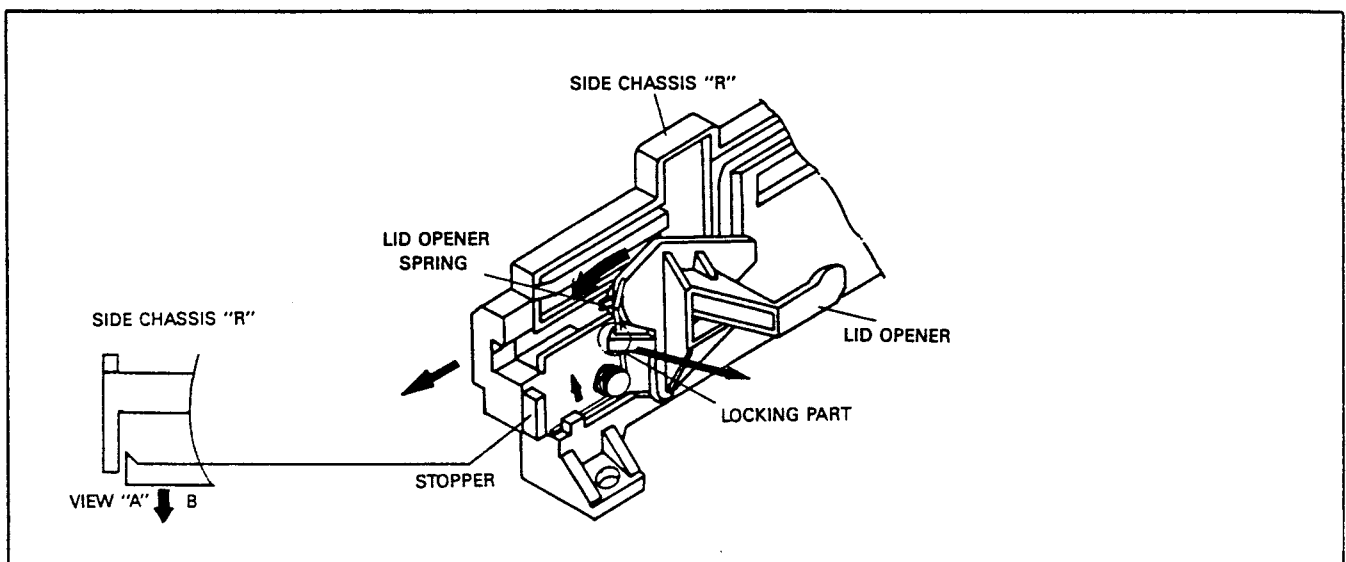


Fig. 17 Lid Opener Removal

7. Lid opener removal (Fig. 17)

- Remove the lid opener spring from the locking part of the lid opener.
- Pull the lid opener in the direction of A. and release the locking part pulling it in the direction of B, be fore touching the stopper of the side chassis. (Refer to view A)

8. After removing the screw (B), remove the side arm (R) (Fig. 15)

Note: Arm tension spring is set up to the side arm (R).

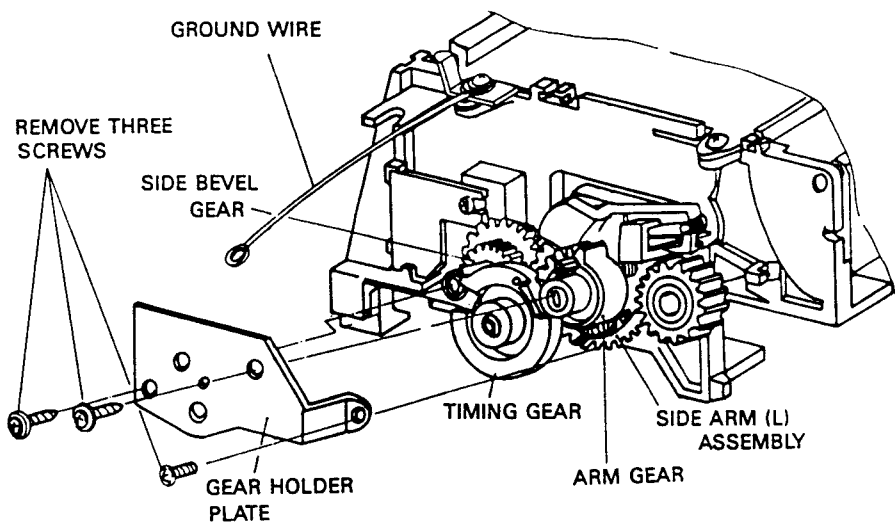


Fig. 18 Timing Gear/Side Arm (L) Assembly/Side Bevel Gear Removal

9. Remove the three screws of the gear holder plate holding each gear. (Fig. 18)
(Remove the ground wire at the same time)
10. Remove the timing gear. (Fig. 18)
11. Remove the side arm (L) assembly. (Fig. 18)
12. Remove the side bevel gear. (Fig. 18)

Notes: •Side arm (R) reinstalling the side arm (L) assembly.

Fix at the reinstalling point of relay gear (R) and (L), and at this moment cassette holder shaft (R) (L) must be inserted in the groove of the side arm (R) (L) (Fig. 19)

•When assembling the timing gear, first tooth of the arm gear (C) must be fitted between the full tooth (A) and the half tooth (B) of the timing gear like the "A" part of the Fig. 19.

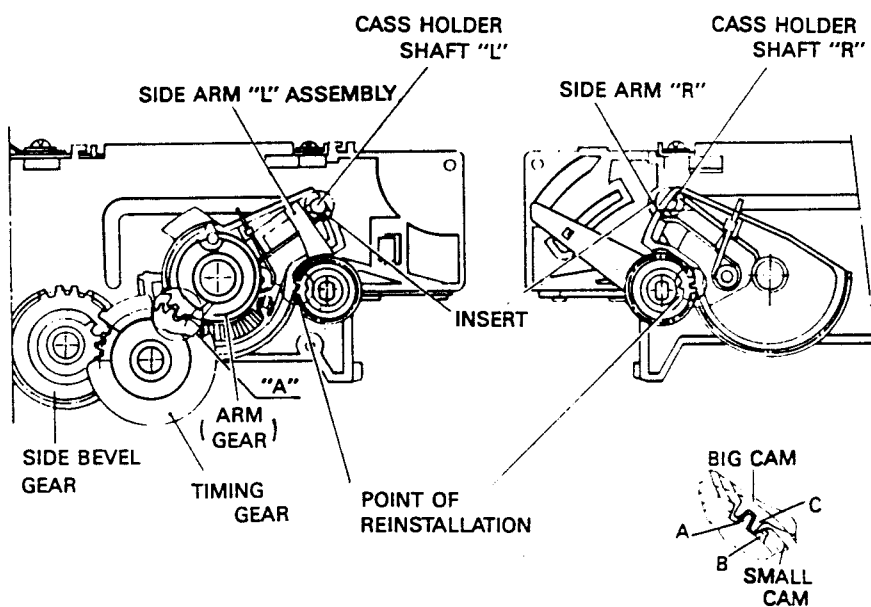


Fig. 19 Side Arm (R) and (L) Reinstallation

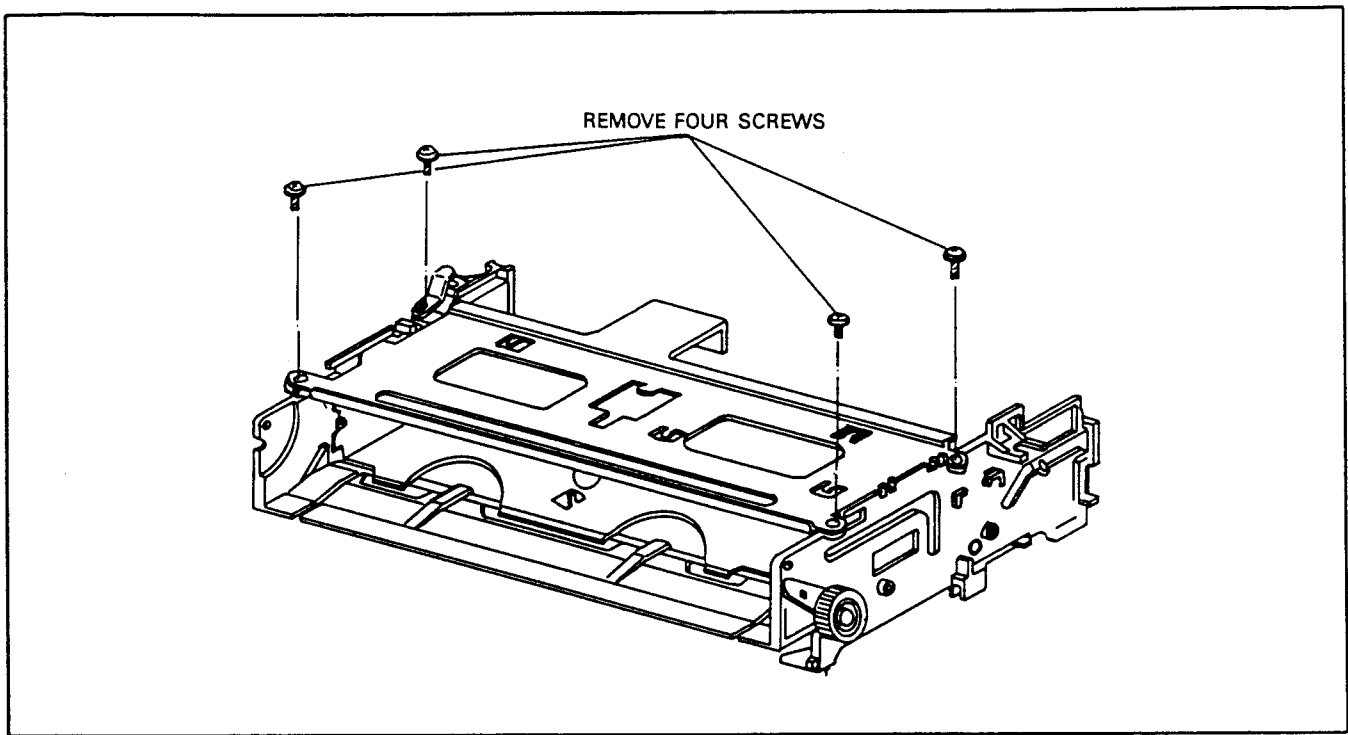


Fig. 20 Upper Chassis Removal

13. After removing four screws, pull the upper chassis upward to remove. (Fig. 20)

14. Side Arm (L) Assembly Remove. (Fig. 21)

- 1) Release the eject spring.
- 2) Remove the arm gear.
- 3) Release the arm tension spring.

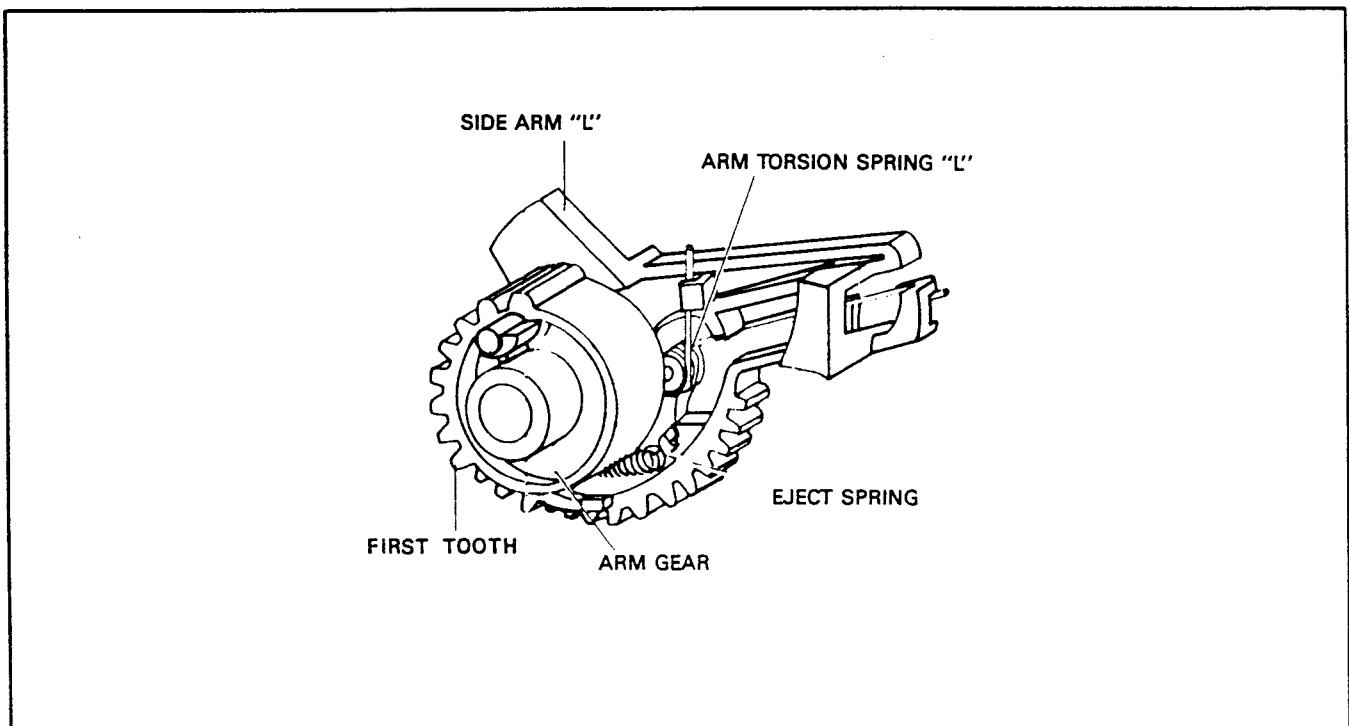


Fig. 21 Side Arm (L) Assembly Removal

2-2-4. Mechanical Chassis Assembly Removal (Fig. 22)

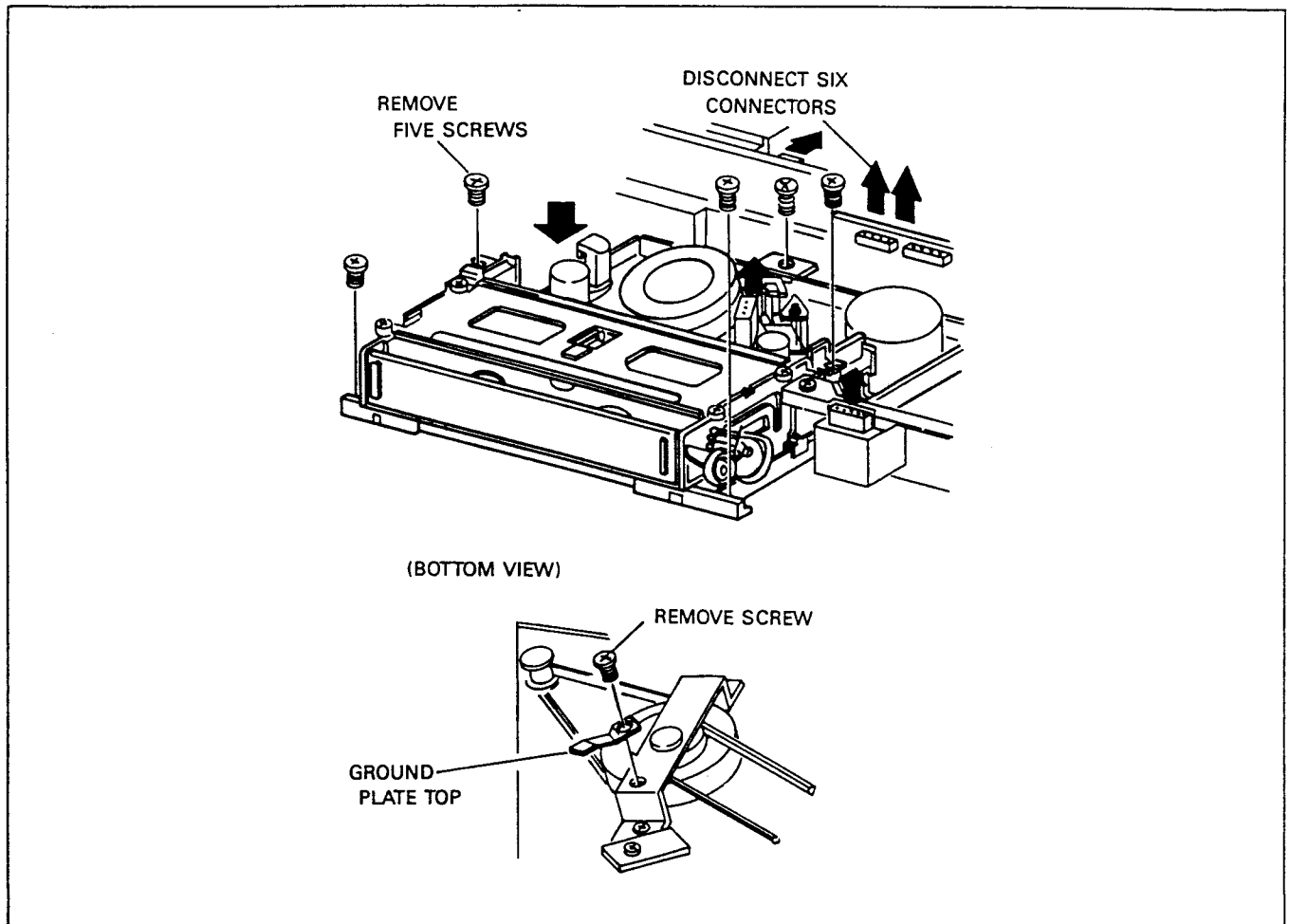


Fig. 22 Mechanical Chassis Assembly Removal

1. Remove the Panels (See Figs. 1 to 3)
2. Remove the screw. (Bottom View)
3. Disconnect six connectors.
4. Remove five screws and pull the mecha chassis assembly upward to remove.

2-2-5. Video Head (Upper Drum) Removal and Drum Motor Assembly Removal. (Fig. 23)

Note: Take extreme care when removing the upper drum. Do not touch the video head tips (located in the upper drum) during servicing.

Follow the procedure for removing

1. Remove the top cabinet (See Fig. 1)
2. Remove the bottom cover (See Fig. 2)
3. Remove two (A) screws holding the cover upper drum.
4. Remove four wires soldered to PWB-Upper drum P-3.

Note: Upon reinstallation, connect four wire colors to wires of the same color which are soldered PWB-Upper drum P-3.

5. Remove two (B) screws on the upper drum.
6. Lift up the upper drum in the direction of the arrow.
7. Remove two (C) screws holding the drum motor.
8. Disconnect connector from the drum motor.
9. Remove three screws (D) holding the drum motor.

When it is necessary to remove lower drum, remove three screws (E) and lift up the lower drum assembly in the direction of the arrow.

Note: Upon reinstallation, alternately tighten two (2) upper drum holding screws and perform the following adjustments.
Tracking Preset Adjustment.
A/C Head Horizontal Position Adjustment.

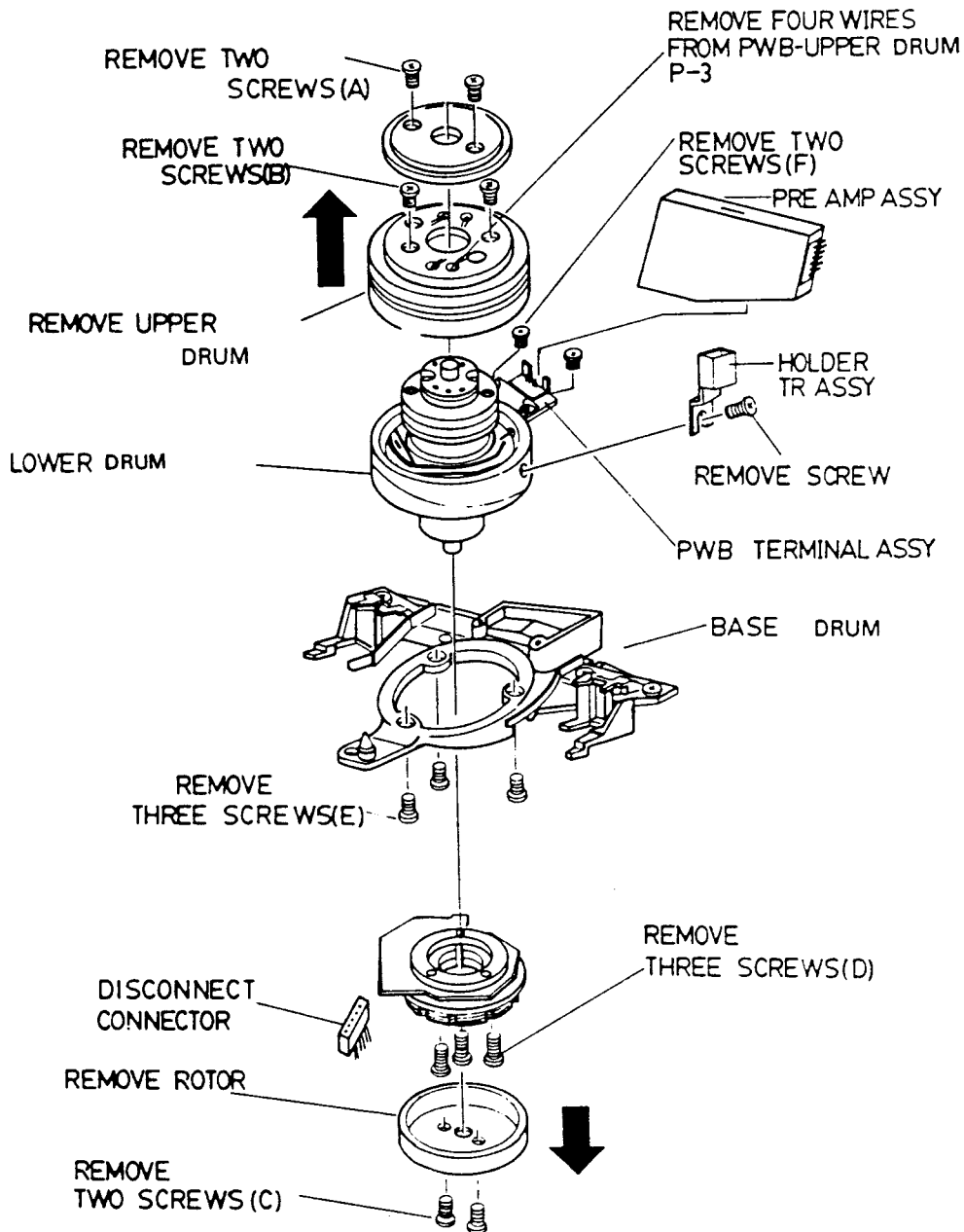


Fig. 23 Video Head Removal and Drum Motor Assembly Removal.

2-2-6. Full Erase (FE) Head/Supply Roller Removal (Fig. 24)

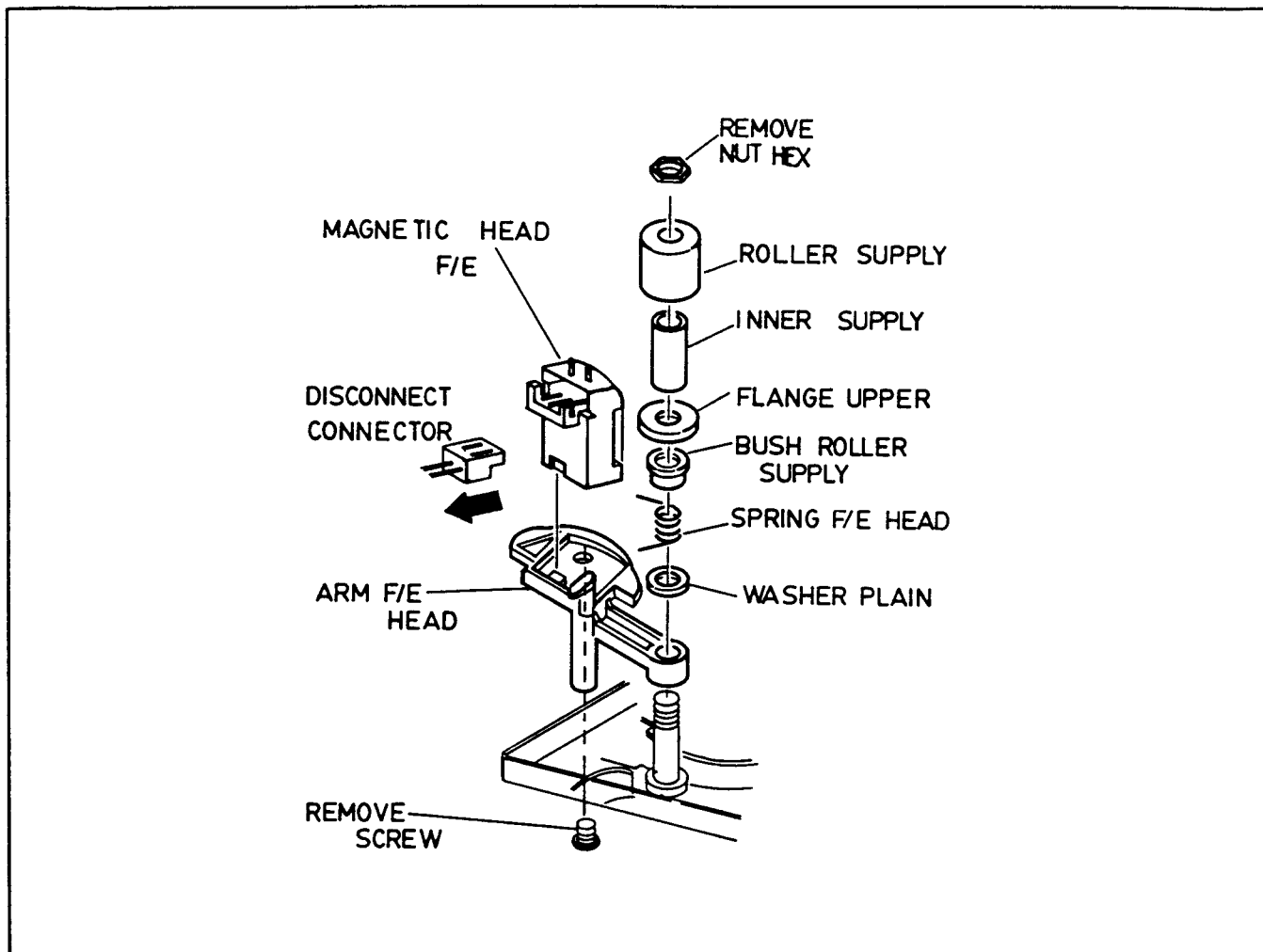


Fig. 24 Full Erase (FE) Head/Supply Roller Removal

1. Remove the top cabinet (See Fig. 1)
2. Disconnect connector from the F/E Head.
3. Remove the nut at the top of the supply roller and remove the washer plain, supply roller, inner supply, flange upper, bush roller supply.
4. Remove the spring F/E head arm, washer plain.
5. Pull the arm F/E head upward to remove.

6. Remove the screw holding the F/E head at the back of the base.
7. After replacing or reinstalling the FE head, clean each tape contact surface of the F/E head and supply roller.

Note: Upon reinstallation, perform the supply roller height adjustment.

2-2-7. Audio/Control (A/C) Head Removal (Fig. 25)

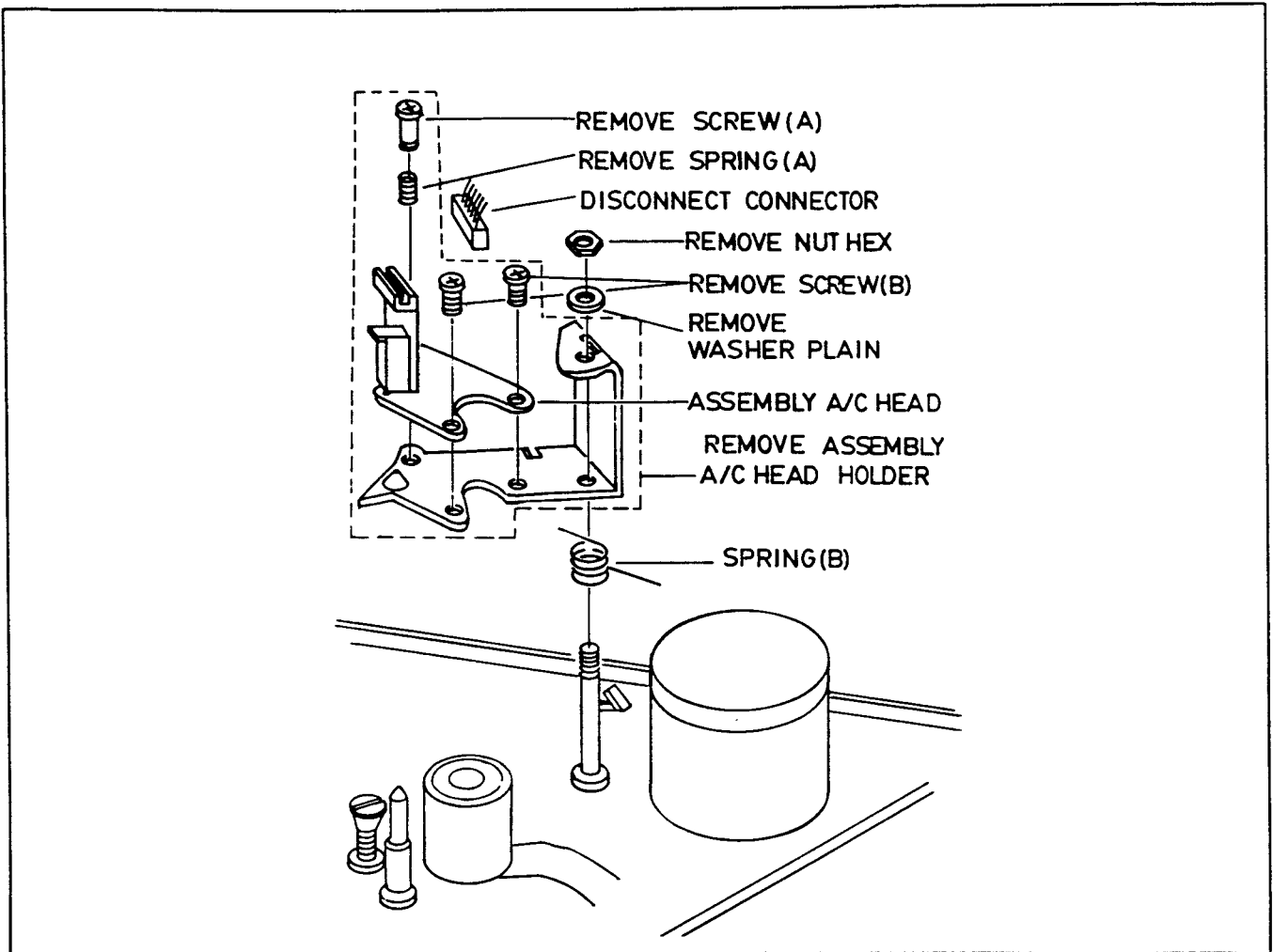


Fig. 25 Audio/Control (A/C) Head Removal

1. Remove the top cabinet. (See Fig. 1)
2. Disconnect connector from the A/C head.
3. Remove the nut holding the A/C Head Holder and remove the washer plain.
4. Pull the A/C head assembly upward to remove.
5. Remove screw (A) and spring (A)
6. Remove screw (B) and remove assembly ahead.
7. After replacing or reinstalling the assembly A/C head holder, clean the tape contact surface of the head.

Note: Upon reinstallation, hook the spring between A/C head base and mecha chassis.

After installing the assembly A/C head and assembly A/C head holder, perform the following adjustment.

- 1) A/C Head Height, Tilt and Azimuth Adjustments.
- 2) A/C Head Horizontal Position Adjustment.
- 3) Audio Playback Gain Adjustment.
- 4) Audio Bias Level Adjustment.

- Audio head height must be performed before A/C head, horizontal position adjustment is performed.
- If audio head height is adjusted, the A/C head horizontal position must be readjusted.
- After completion, of the A/C head position adjustment, the A/C head base must be positioned at approximately the center of the mat adjust.

2-2-8. Loading Motor Assembly Removal (Fig. 26)

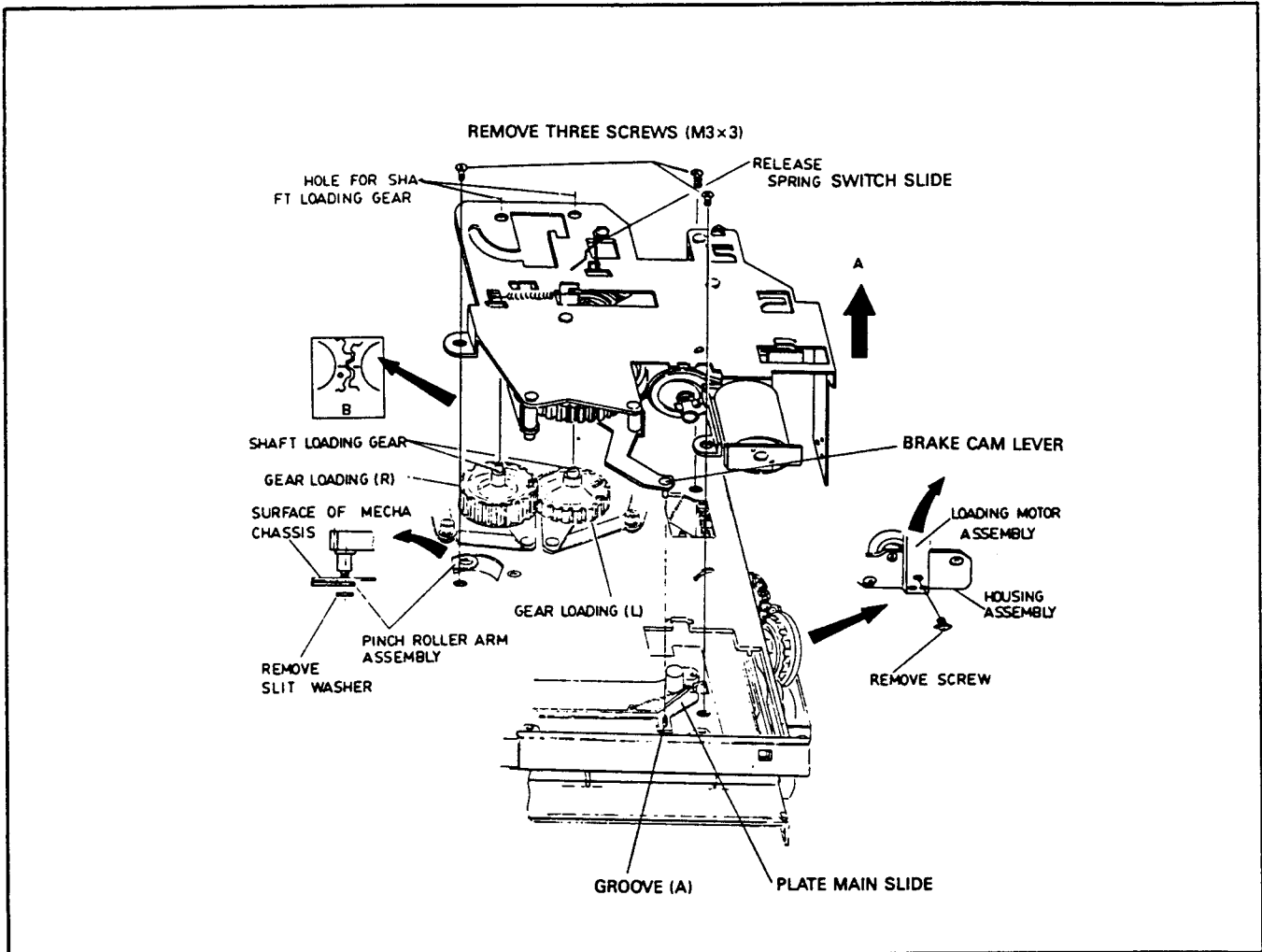


Fig. 26 Loading Motor Assembly Removal

1. Remove the top cabinet (See Fig. 1)
2. Remove the bottom cover (See Fig. 2)
3. Remove the mecha chassis assembly (See Fig. 22)
4. Remove the housing assembly (See Fig. 12)
5. Remove the slit washer
6. Release the spring S/W slide, and the gear loading spring
7. Remove the three screws and pull the loading motor assembly upward in the direction arrow mark (A)

Note: Upon reinstallation, be sure the marks on the gear loading (L), (R) are positioned in the line (See. B) and S/W slide position is at the end of left side.

2-2.9. Arm Tension Assembly, Tension Band Assembly and Holder Tension Spring Removal. (Fig. 27)

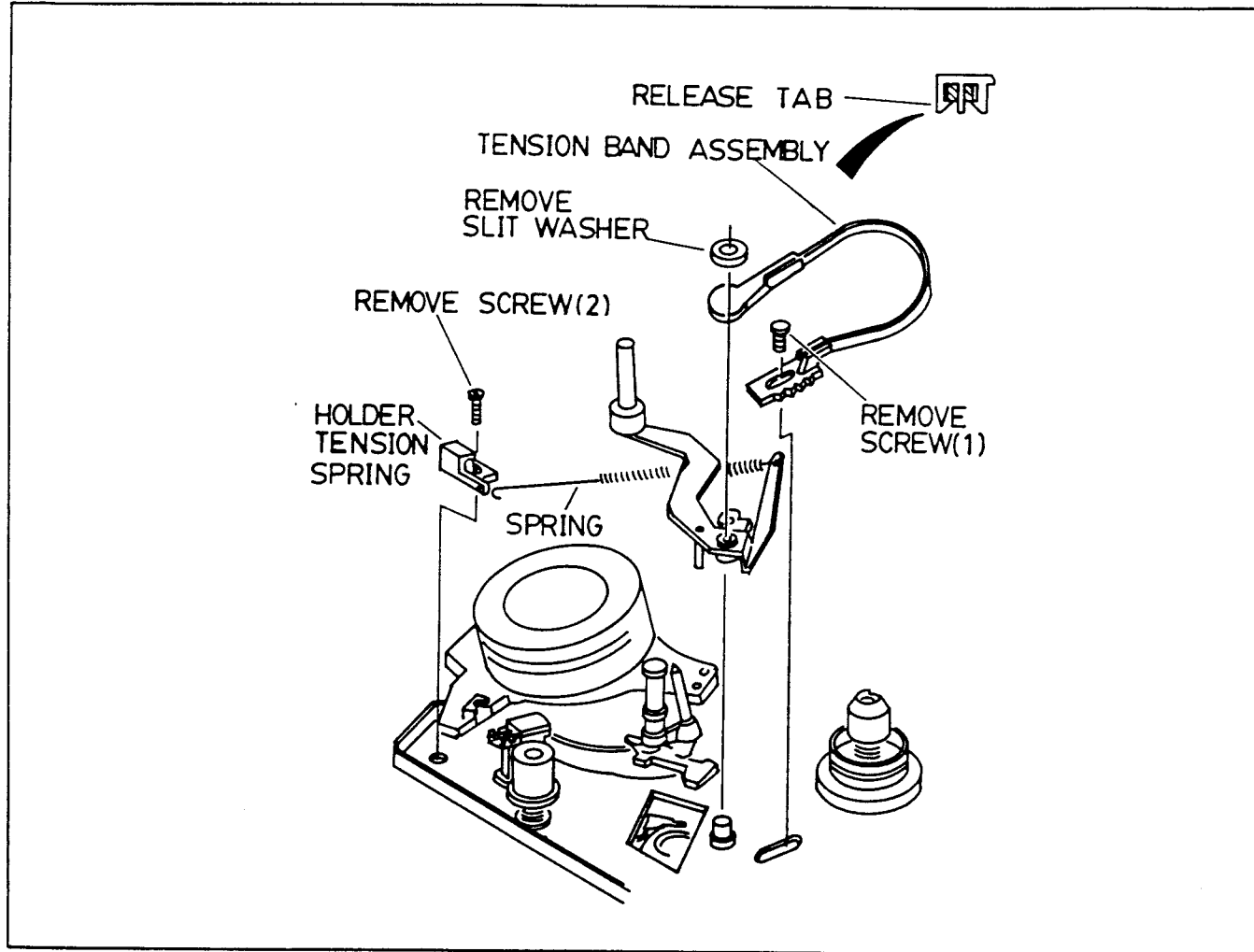


Fig. 27 Arm Tension Assembly, Tension Band Assembly and Holder Tension Spring Removal

1. Remove the screw (1) holding the tension band assembly
2. Release the spring hooked on the holder tension spring.
3. Remove the screw (2) and remove the holder tension spring.
4. Remove the slit washer and Pull the arm tension assembly upward.
5. Release the tab holding the tension band assembly.

Note: _____

2-2-10. Brake Sub (R) Assembly and Brake Sub (L) Assembly Removal. (Fig. 28)

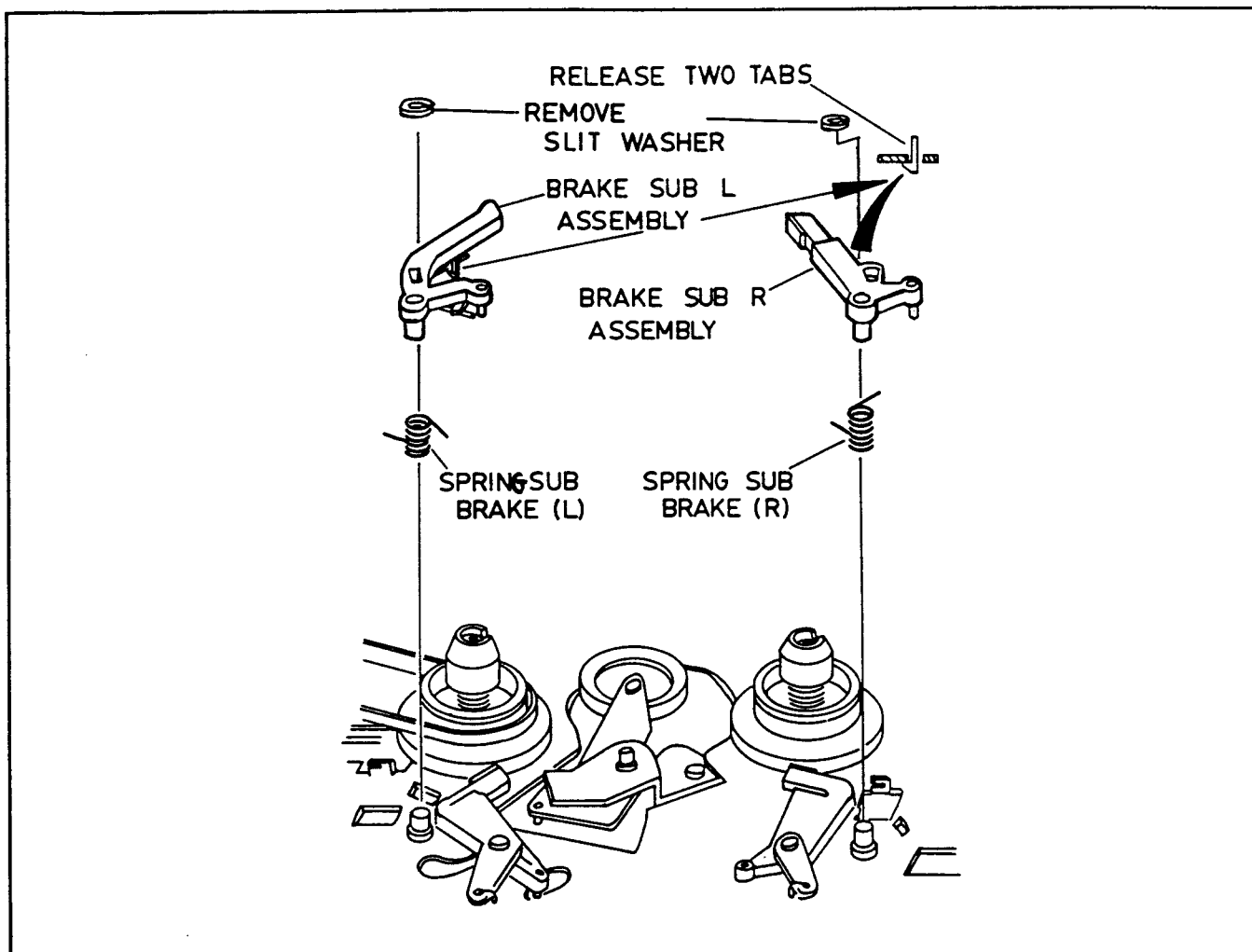


Fig. 28 Brake Sub (R) Assembly and Brake Sub (L) Assembly Removal

1. Follow the procedure for removing the Panels.
(See Figs. 1 to 3)
2. Remove the housing assembly (See Fig. 12)
3. Remove the two slit washers and release the sub brake (R) spring.
4. Release the tabs holding the brake Sub (R) assembly and brake sub (L) assembly.

Note: Take care when removing spring.

Note: _____

2-2-11. Brake Main (L) Assembly and Brake Main (R) Assembly Removal (Fig. 29)

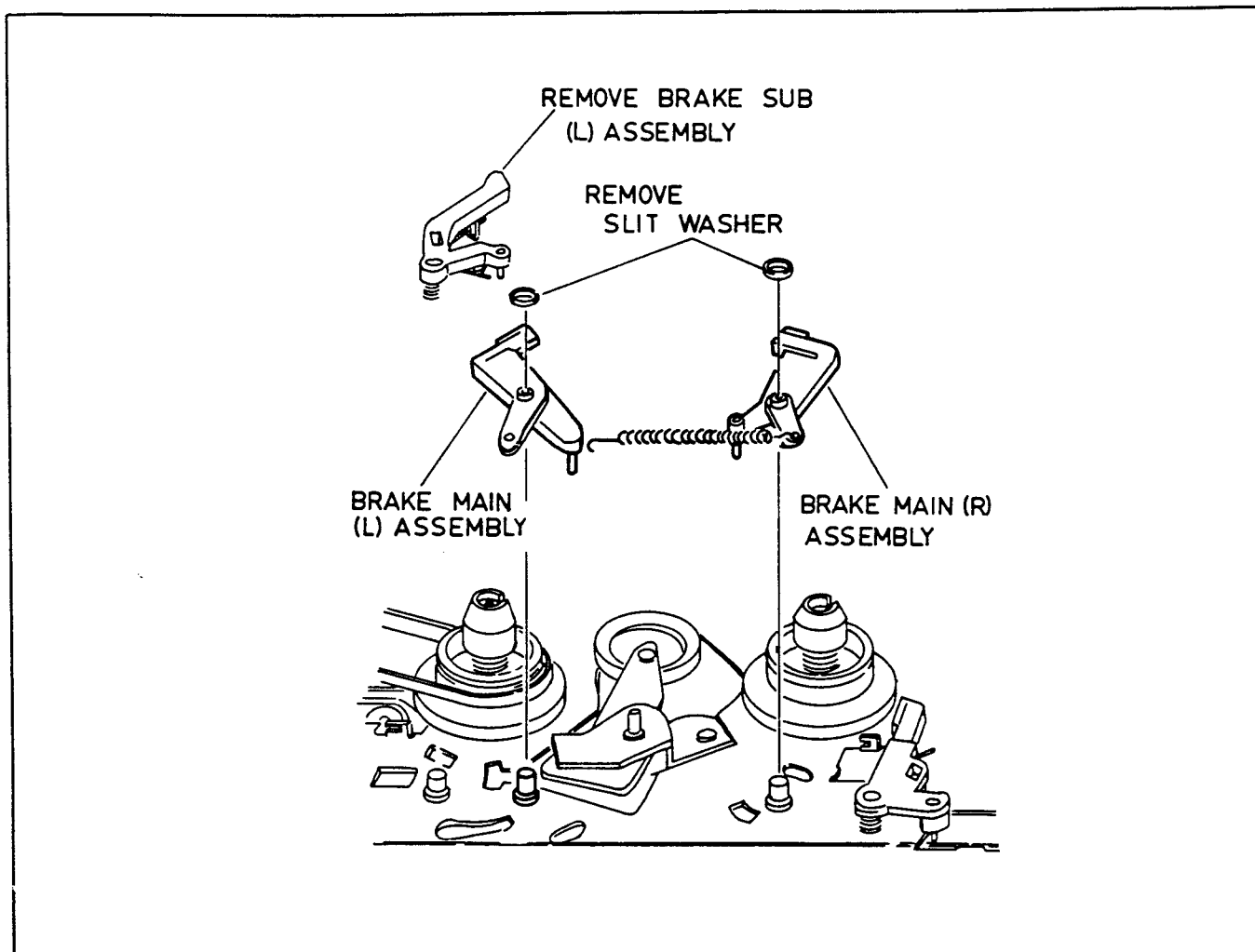


Fig. 29 Brake Main (L) Assembly and Brake Main (R) Assembly Removal

1. Follow the procedure for removing the panels.
(See Figs. 1 to 3)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the brake sub (L) assembly. (See Fig. 28)
4. Remove the two slit washers.
5. Release the spring hooks on the brake main assemblies.

Note: _____

2-2-12. Capstan Motor Removal (Fig. 30)

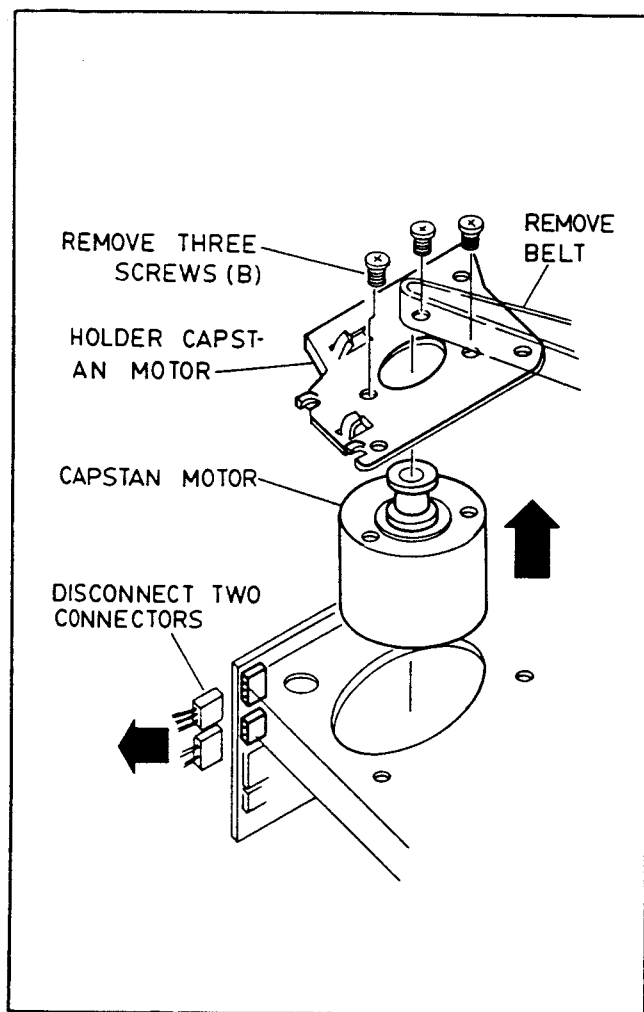


Fig. 30 Capstan Motor Removal

1. Remove the Panels. (See Fig. 1 to 3)
2. Remove the mecha chassis assembly (See Fig. 22)
3. Disconnect two connectors.
4. Release the capstan belt from the pulley capstan.
5. Remove three screws (B) attached to capstan motor.

2-2-13. Assembly Gear Loading (L) (R) Removal (Fig. 31)

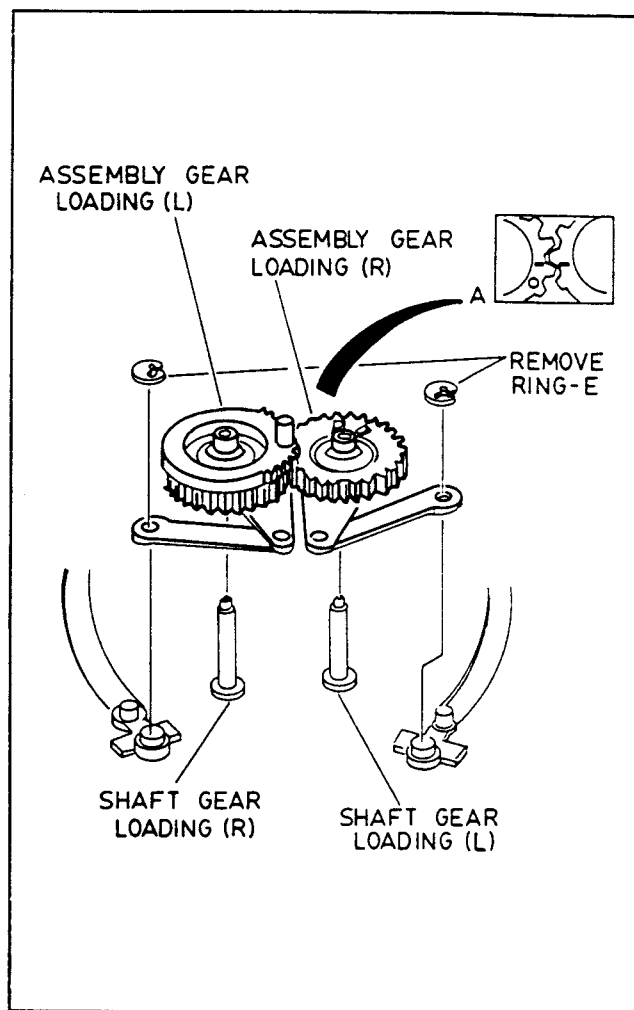


Fig. 31 Assembly Gear Loading (L) (R) Removal

1. Follow the procedure for removing the panels (See Figs. 1 to 3)
2. Remove mecha chassis assembly (See Fig. 22)
3. Remove the housing assembly (See Fig. 12)
4. Remove the loading motor assembly (See Fig. 26)
5. Remove the ring-E holding on the arm loading assembly.

Note: Fully unloaded position upon reinstallation, be sure the marks on the gear loading (L) (R) are positioned in the line (See. A)

2-2-14. Guide Roller Assembly Removal (Fig. 32)

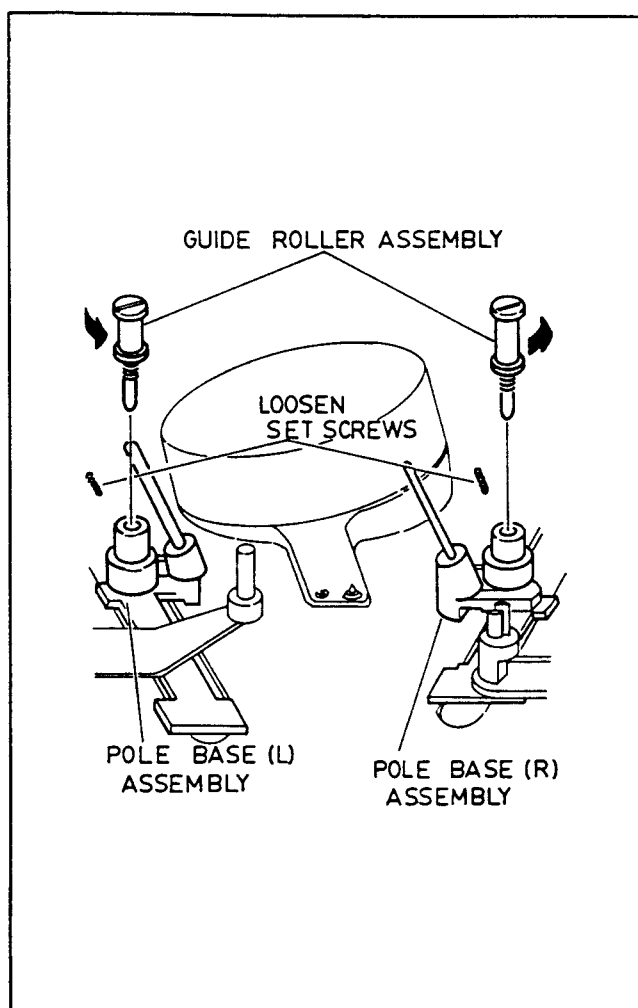


Fig. 32 Guide Roller Assembly Removal

1. Remove the top and the bottom cover. (See Figs. 1, 2)
2. Loosen each set screw at the pole base assembly.
3. Turn the guide roller assemblies to the counter clock wise.
4. After replacing or reinstalling the guide roller assemblies, clean each tape contact surface of the guide roller assemblies.

Note: Upon reinstallation, perform the guide roller assemblies adjustment.

2-2-15. Reel Disk (S) Assembly Removal (Fig. 33)

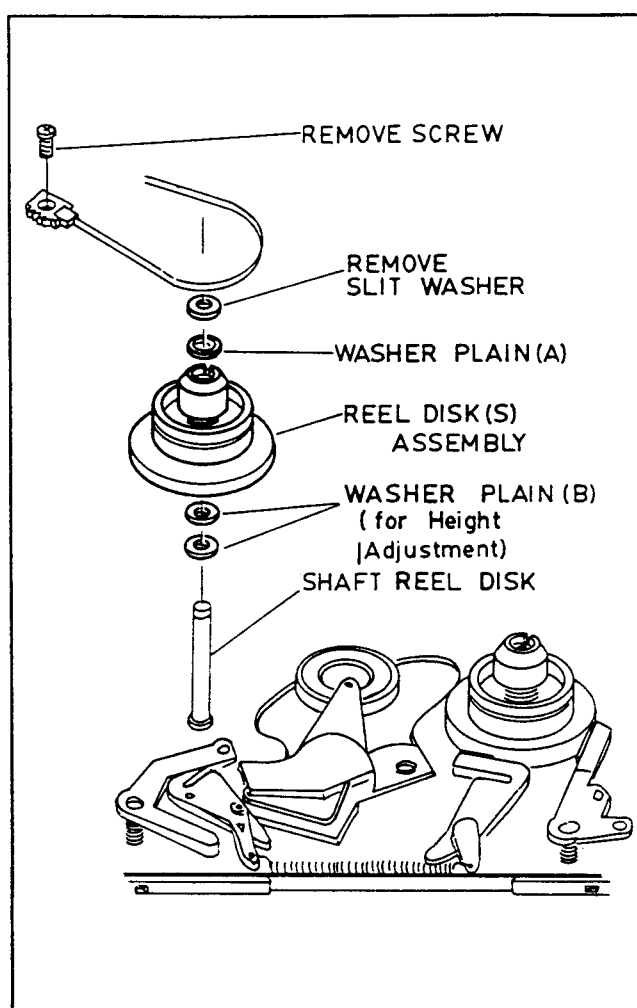


Fig. 33 Reel Disk (S) Assembly Removal

1. Remove the top and bottom panels. (See Figs. 1, 2)
2. Remove the housing assembly (See Fig. 12)
3. Remove the screw holding the tension band assembly.
4. Remove the slit washer from the shaft reel disk.
5. Remove the washer plain (A)

Note: Pay particular attention to the washer plain (B) under the reel disk (S) assembly.

2-2-16. Reel Disk (T) Assembly Removal.
(Fig. 34)

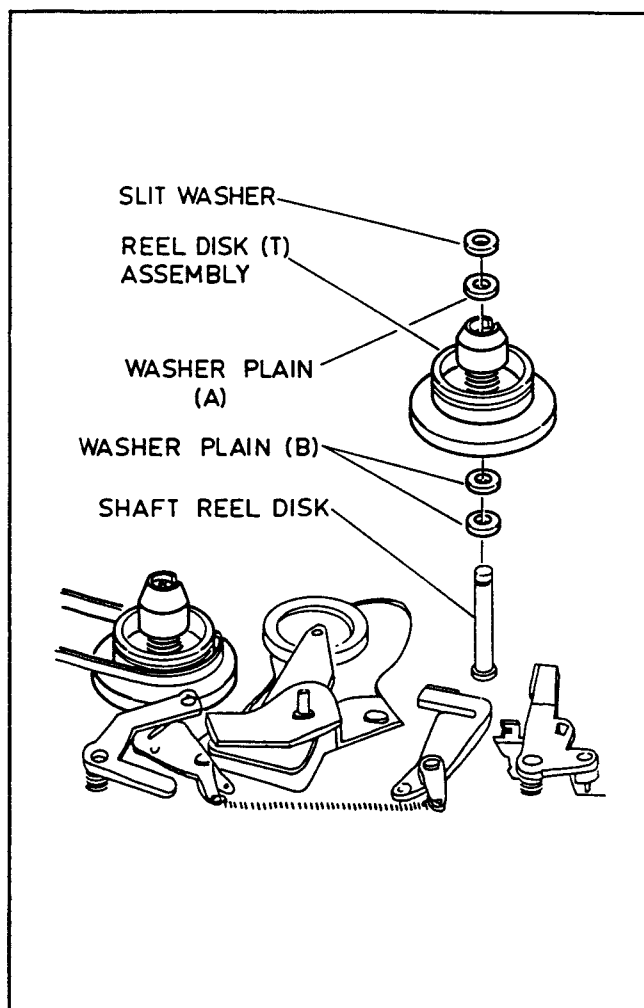


Fig. 34 Reel Disk (T) Assembly Removal

1. Remove the top and bottom cover. (See Fig. 1,2)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the slit washer from the shaft reel disk.
4. Remove the washer plain (A) and pull the reel disk (T) assembly upward.

Note: Pay particular attention to the washer plain (B) under the reel disk (T) assembly.

2-2-17. Pinch Roller Assembly and Pinch Roller Arm Assembly Removal (Fig. 35)

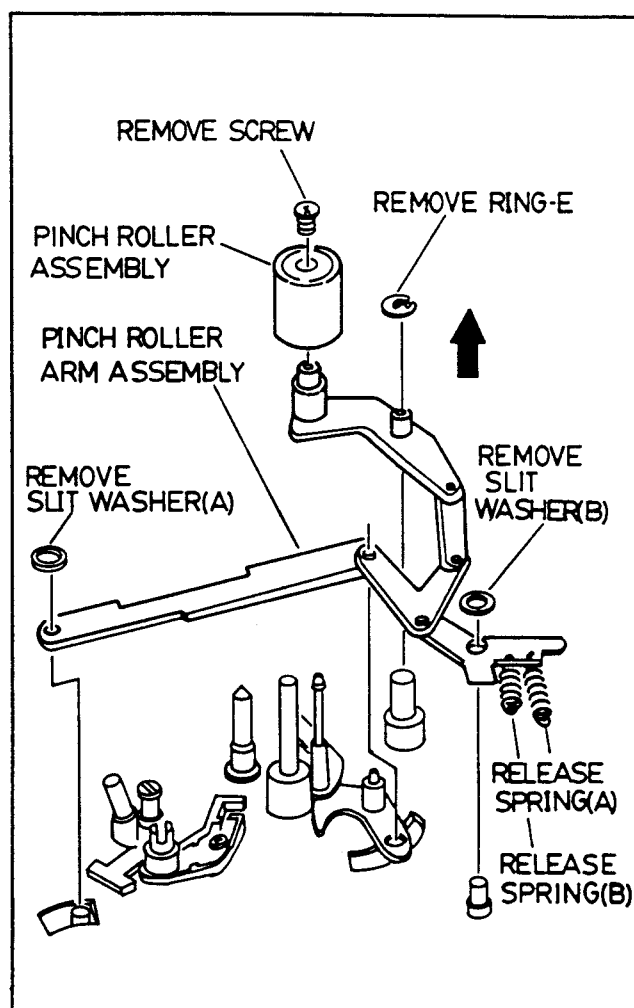


Fig. 35 Pinch Roller Assembly and Pinch Roller Arm Assembly Removal

1. Follow the procedure for removing the panels (See Figs. 1 to 2)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the screw holding the pinch roller assembly.
4. Remove the ring-E
5. Remove the slit washer (A) and slit washer (B)
6. Release the spring pinch roller.
7. Pull the pinch roller arm assembly upward (arrow mark direction) to remove.

**2-2-18. Assembly Holder LED Removal
(Fig. 36)**

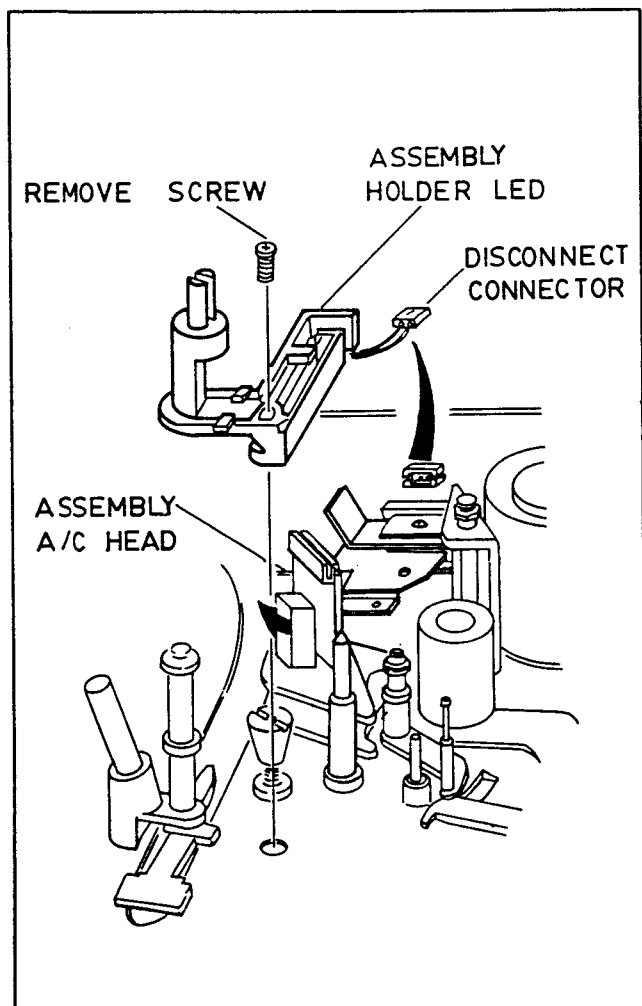


Fig. 36 Assembly Holder Led Removal

1. Follow the procedure for removing the panels. (See Fig. 1)
2. Remove the housing assembly. (See Fig. 12)
3. Disconnect connector.
4. Remove screw and pull the assembly holder LED upward to remove at the same time pushing the assembly A/C head toward arrow mark direction.

**2-2-19. Review Arm Assembly Removal
(Fig. 37)**

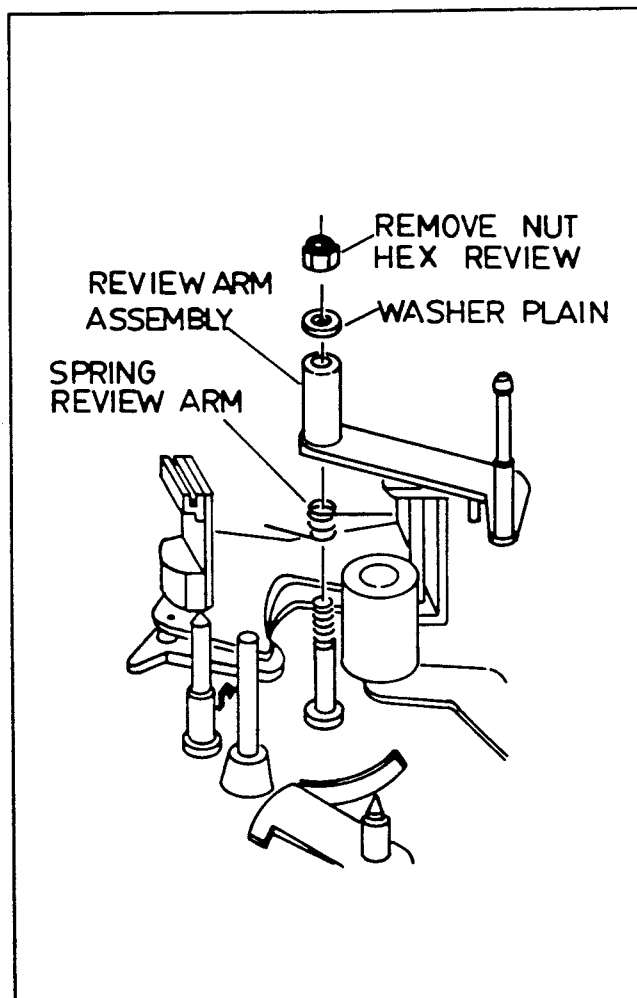


Fig. 37 Review Arm Assembly Removal

1. Remove the top cabinet (See Fig. 1)
2. Remove nut hex, collar review and washer Plain.
3. Release spring review arm.
4. Pull the review arm assembly upward to remove.

Note:

- After replacing or reinstalling the review arm assembly.
- Clean the tape contact surface of the review arm assembly.
- Upon reinstallation, perform the review arm assembly adjustment.

2-2-20. Drum Assembly Removal (Fig. 38)

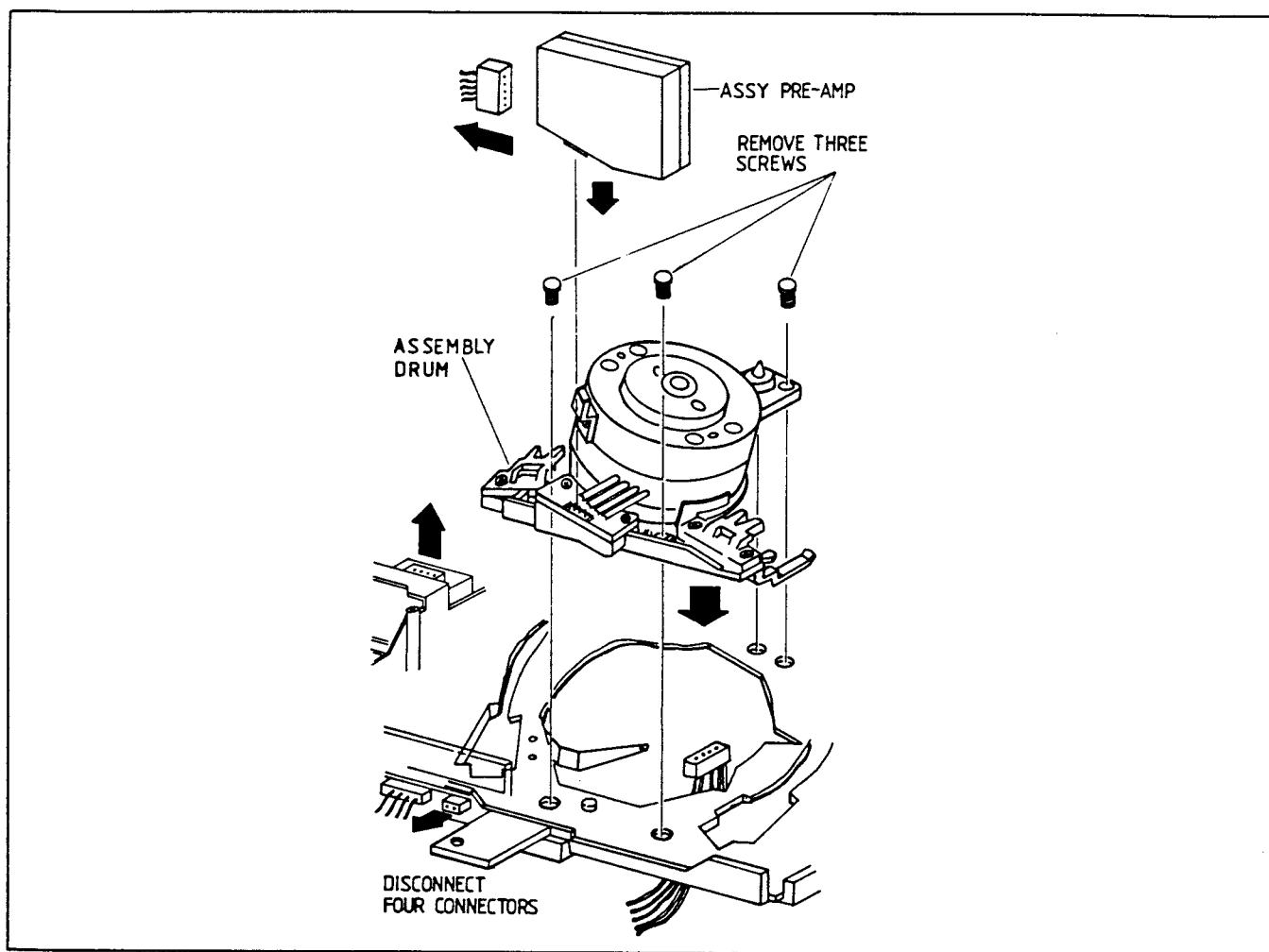


Fig. 38 Drum Assembly Removal

Note: Upon replacement of drum assembly bracket, all mechanical adjustment must be performed.

1. Follow the procedure for removing the panels.
(See Fig 1 to 2)
2. Remove the pre-amp
3. Disconnect four connectors.
4. Remove three screws.

Note: _____

2-2-21. Capstan Flywheel Assembly Removal (Fig. 39)

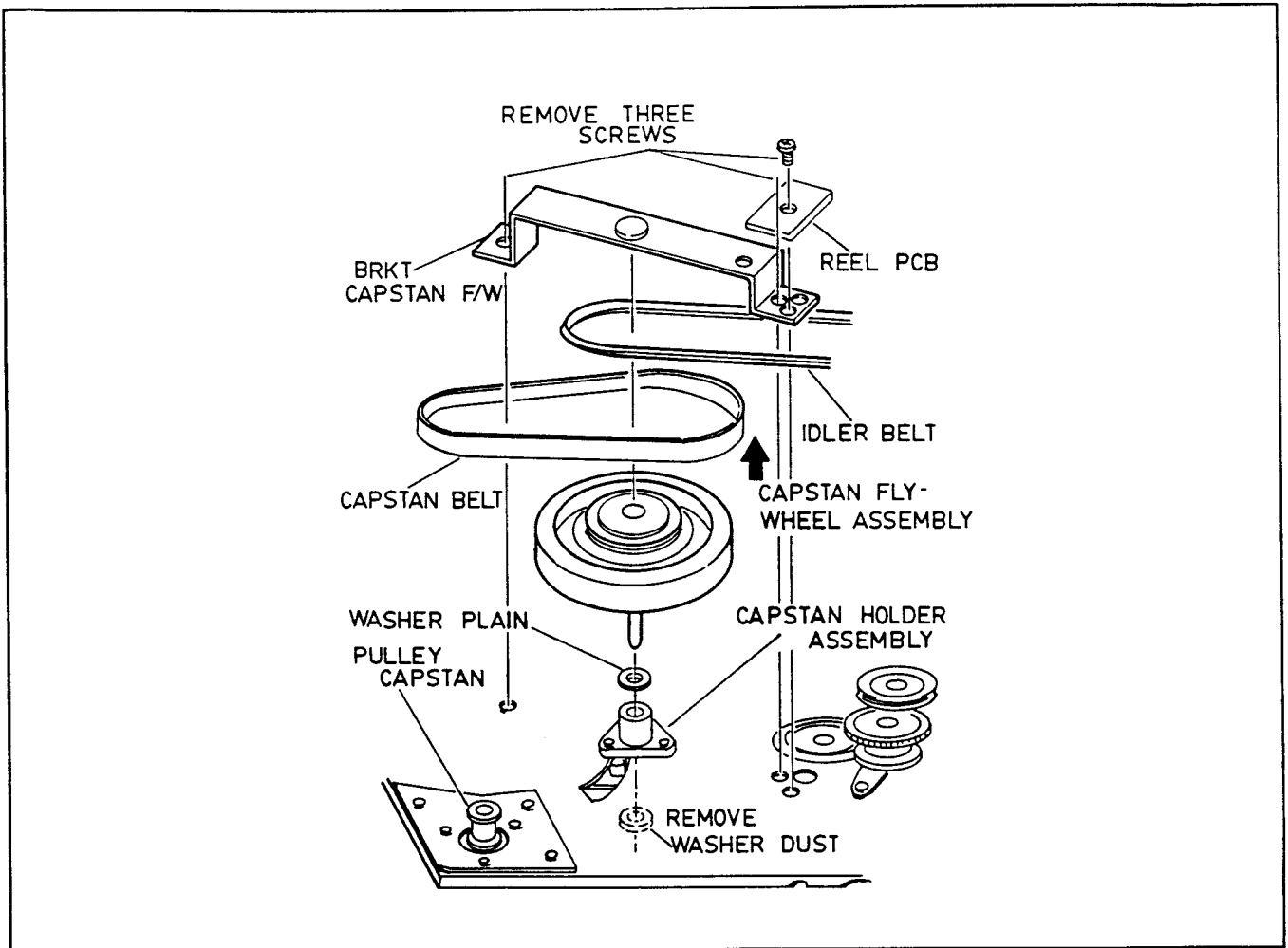


Fig. 39 Capstan Flywheel Removal-Bottom View

1. Remove the top and bottom panels. (See Figs. 1,2)
2. Remove three screws.
3. Release idler belt and capstan belt.
4. Carefully remove the capstan flywheel assembly. A dust washer is located on the shaft below the mecha chassis.
5. After replacing or reinstalling the capstan flywheel, clean the capstan shaft.
6. Remove three screws to remove capstan holder assembly.

Note: _____

2-2-22. Assembly Photo Interrupter Removal. (Fig. 40)

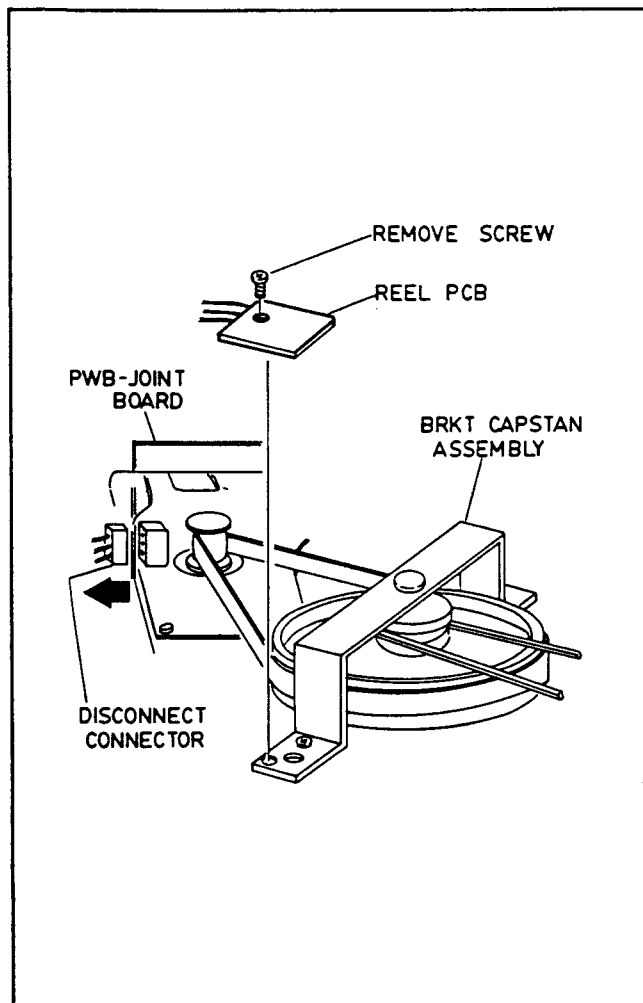


Fig. 40 Assembly Photo Interrupter Removal

1. Remove the top and bottom panels. (See Figs. 1,2)
2. Disconnect connector.
3. Remove screw.

2-2-23. I.B Slide Assembly and Plate Main Slide Removal. (Fig. 41)

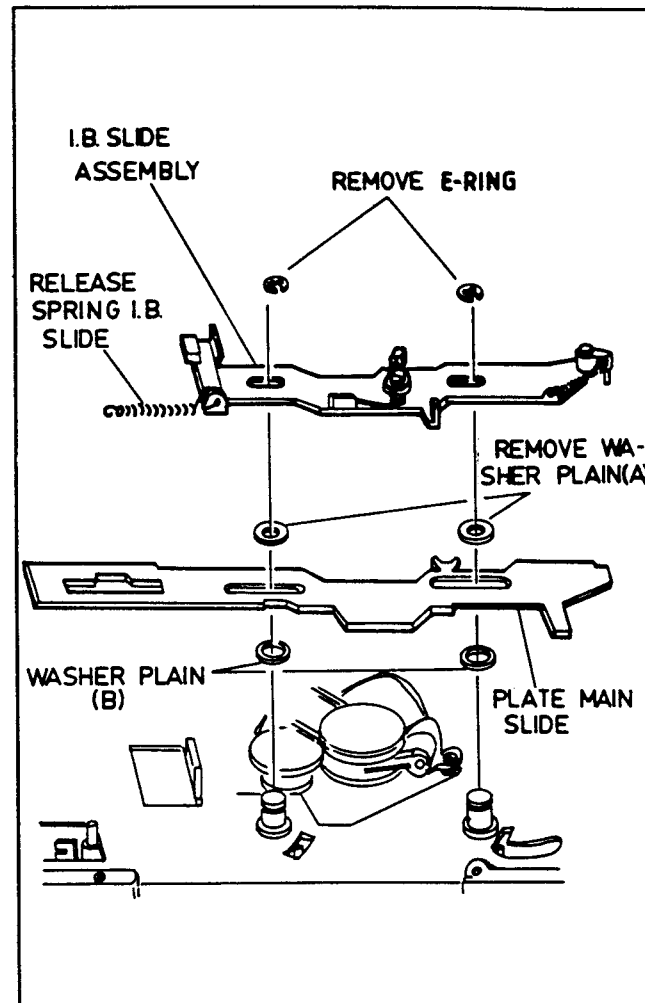


Fig. 41 I.B Slide Assembly and Plate Main Slide Removal

1. Follow the procedure for removing the panels. (See Figs. 1 to 3)
2. Remove mecha chassis assembly. (See Fig. 22)
3. Remove loading motor assembly. (See Fig. 26)
4. Remove the ring-E and release spring I.B slide.
5. Remove washer plain (A) and pull the plate main slide upward to remove.

Note: Pay particular attention to the washer plain (B) under the plate main slide.

•I.B: Idler/Break

2-2-24. Idler Clutch Assembly Removal. (Fig. 42)

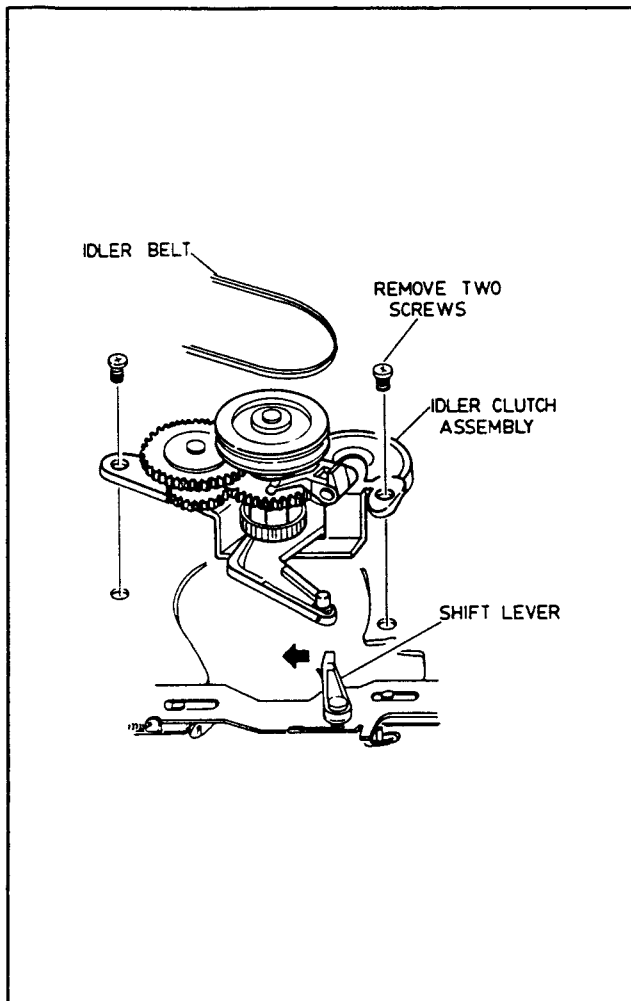


Fig. 42 Idler Clutch Assembly Removal

1. Remove the bottom cover. (See Fig. 2)
2. Release the Idler belt and remove the two screws.
3. Pull the Idler clutch assembly upward to remove, at the same time push the shift lever about 5-10 mm.

2-2-25. Remote Control Hand Unit Disassembly (Fig. 43)

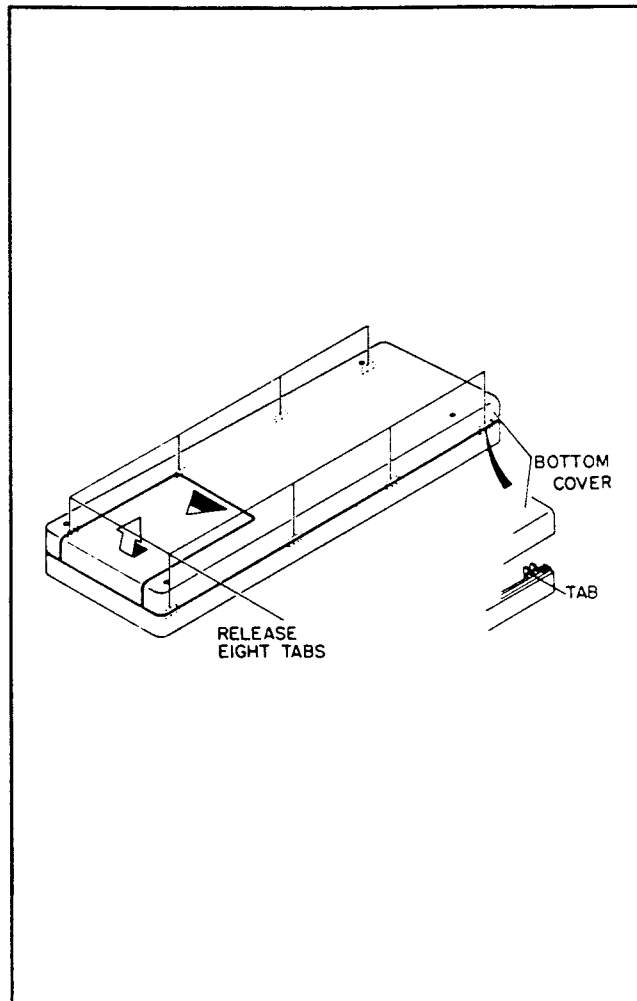


Fig. 43 Remote Control Hand Unit Cover Removal

Remote Control Hand Unit Cover Removal (Fig. 44)

1. Release eight (8) tabs holding the bottom cover.

2-3. HOW TO CHECK THE CIRCUIT BOARD ASSEMBLIES

2-3-1: Regulator C.B.A (Fig. 44)

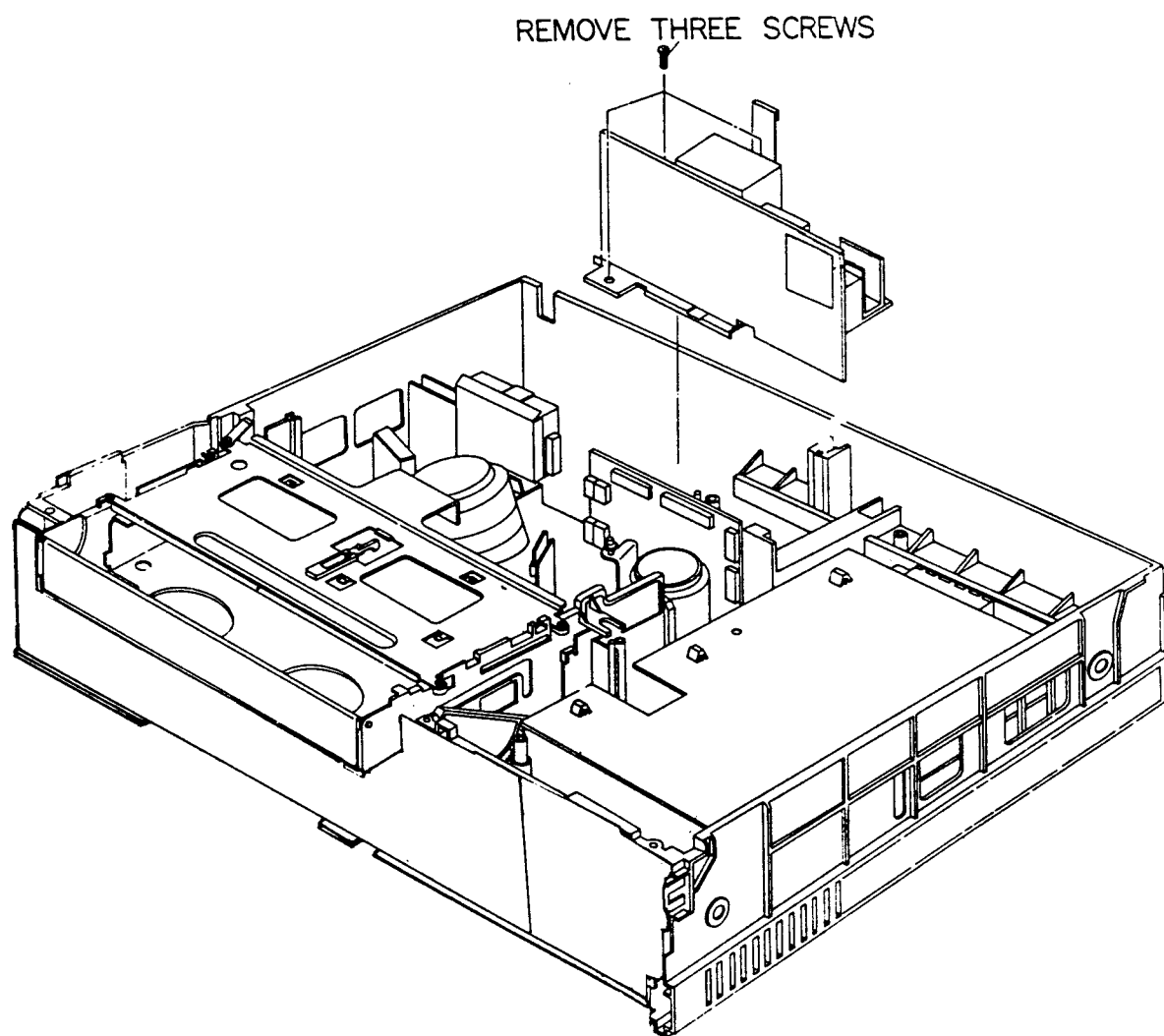


Fig. 44 How to check the circuit board assemblies

1. Release the regulator C.B.A.

Note: Remove the connector (CN101) to check the regulator C.B.A.

2-3-2. Main A C.B.A

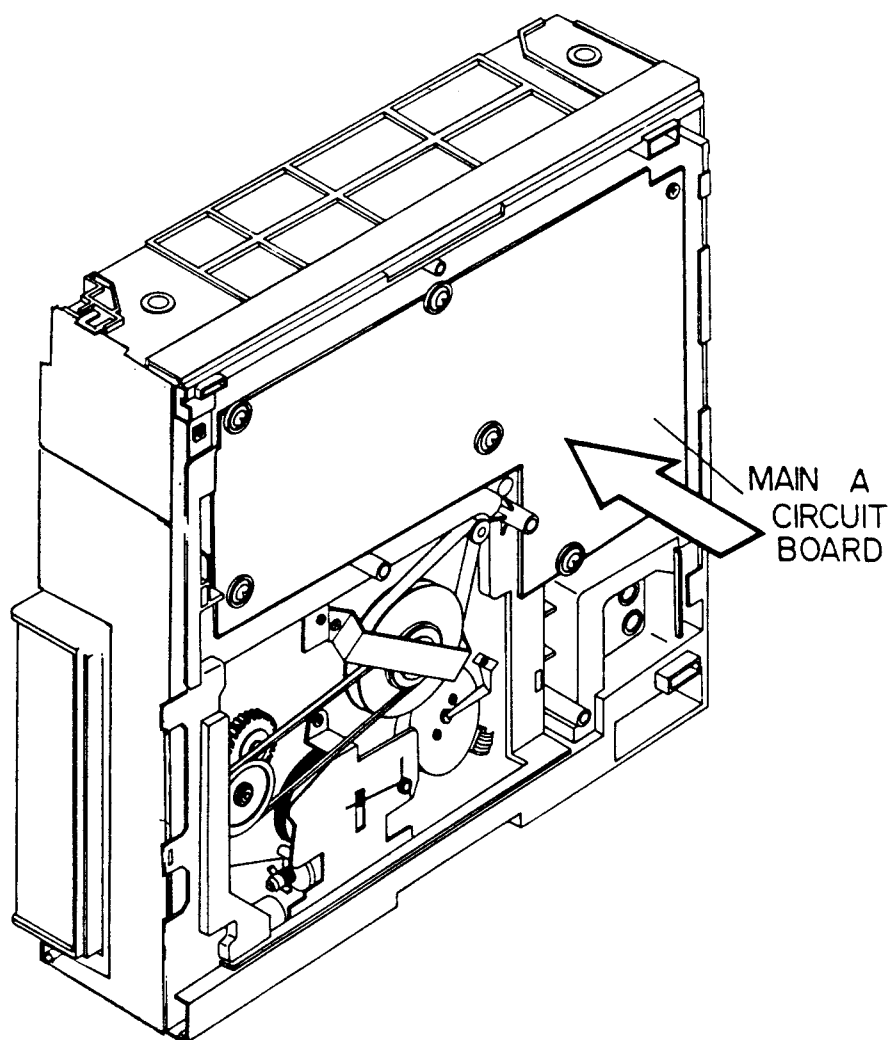


Fig. 45 How to check the circuit board assembly

1. Check from the direction of the arrow.

2-3-3. Main B C.B.A.

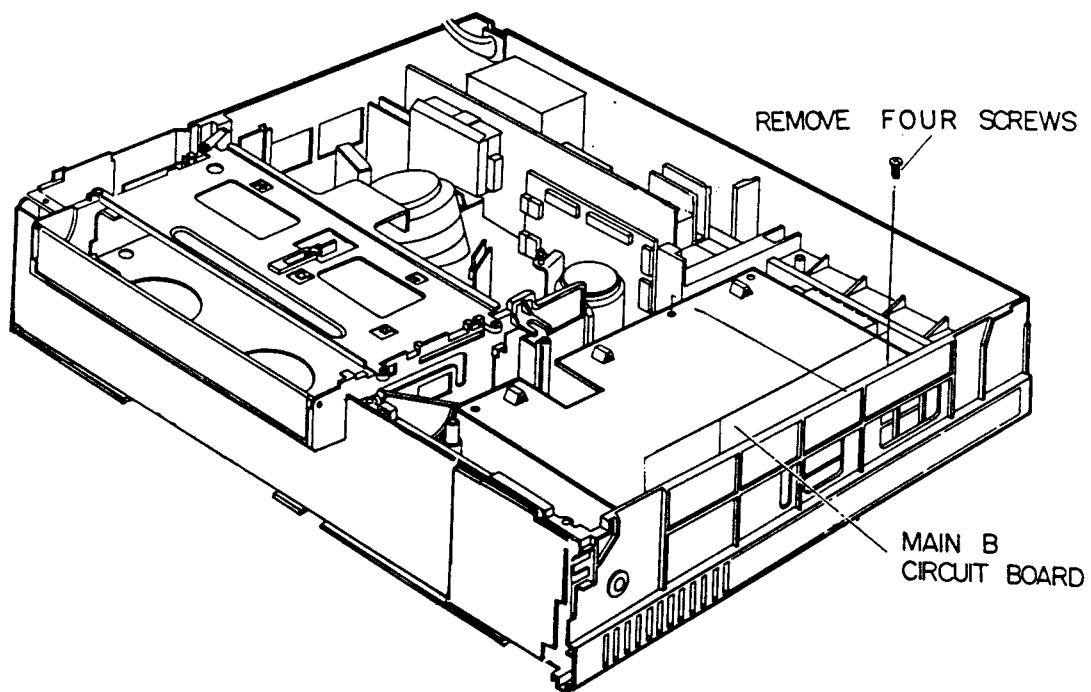


Fig. 46 How to check the circuit board assembly

3. MECHANICAL ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT TOOLS

No	Jig Item.	Code No.	Configuration	Description	Manufacture
1	Head Gauge	SSJ-1001		This jig is used to check and adjust the torque of Takeup/Supply Reel.	SAMSUNG
2	Master Plane and Reel Disk Height	SSJ-1002		This jig is used to check the height difference between Reel Disk and Deck Plate	SAMSUNG
3	Back Tension Measuring Cassette Tape	SSJ-1004		This tape is used for supply reel torque alignment.	SAMSUNG
4	Guide Pole Height Adjusting Jig.	SSJ-1005		Used to adjust tape height to the video head.	SAMSUNG
5	Drum Replacement Jig.	SSJ-1007		This jig is used when replacing the VCR's upper drum.	SAMSUNG
6	Alignment Tape	(SR1-2) SSJ-1014C		This tape is used for fine electrical adjustment and tape running system (MECHA) alignment.	SAMSUNG
		(SR2-2) SSJ-1014D			
7	Tension Gauge (5.0kg)	SSJ-1008		The gauges are used for tension measurements.	JAPAN
8	Torque Gauge	SSJ-1009		This jig is used to check and adjust the torque of Takeup/Supply Reel.	JAPAN
9	Hex Wrench (0.9mm)	SSJ-1010A		These wrenches are used for locking or tightening special Hexagon type screws	GENERAL
	Hex Wrench (1.2mm)	SSJ-1010B			
	Hex Wrench (1.5mm)	SSJ-1010C			
10	Tape Tension Gauge (Tentelo Meter)	SSJ-1011		This tape tension gauge is used for measuring the back tension of the running tape.	U S A

*S.N.A: Service Not Available

2-3-4. Timer/Input Key C.B.A. and Function Switch C.B.A. (Fig. 47).

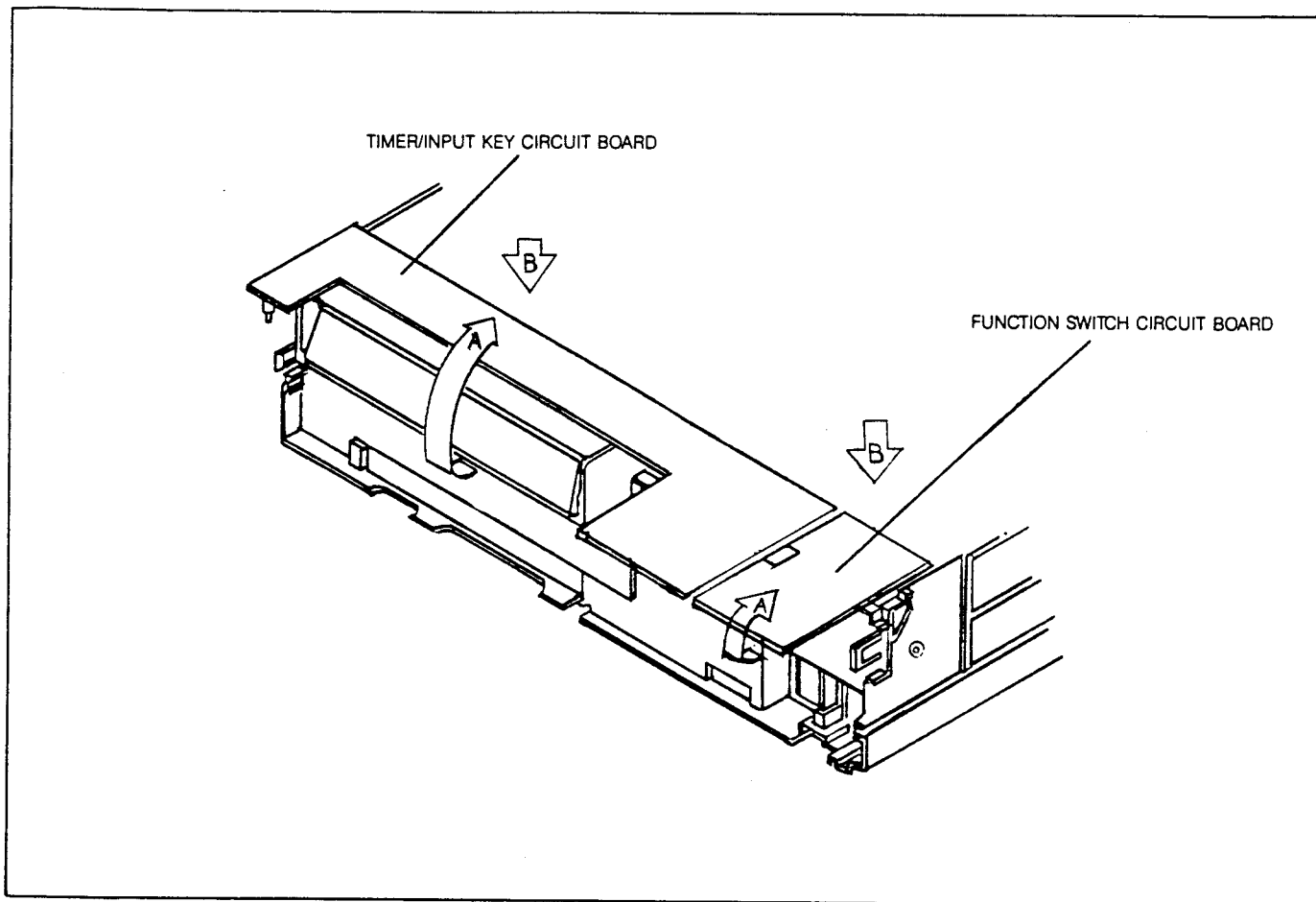


Fig. 47 How to check the circuit board assemblies

1. Remove the timer/input key C.B.A and function switch C.B.A together in the direction of arrow (A), and check from the direction of arrow (B).

Note: Connect the connector (CN601) again to check timer/input key C.B.A and connect this connector as the initial state after checking.

Note: _____

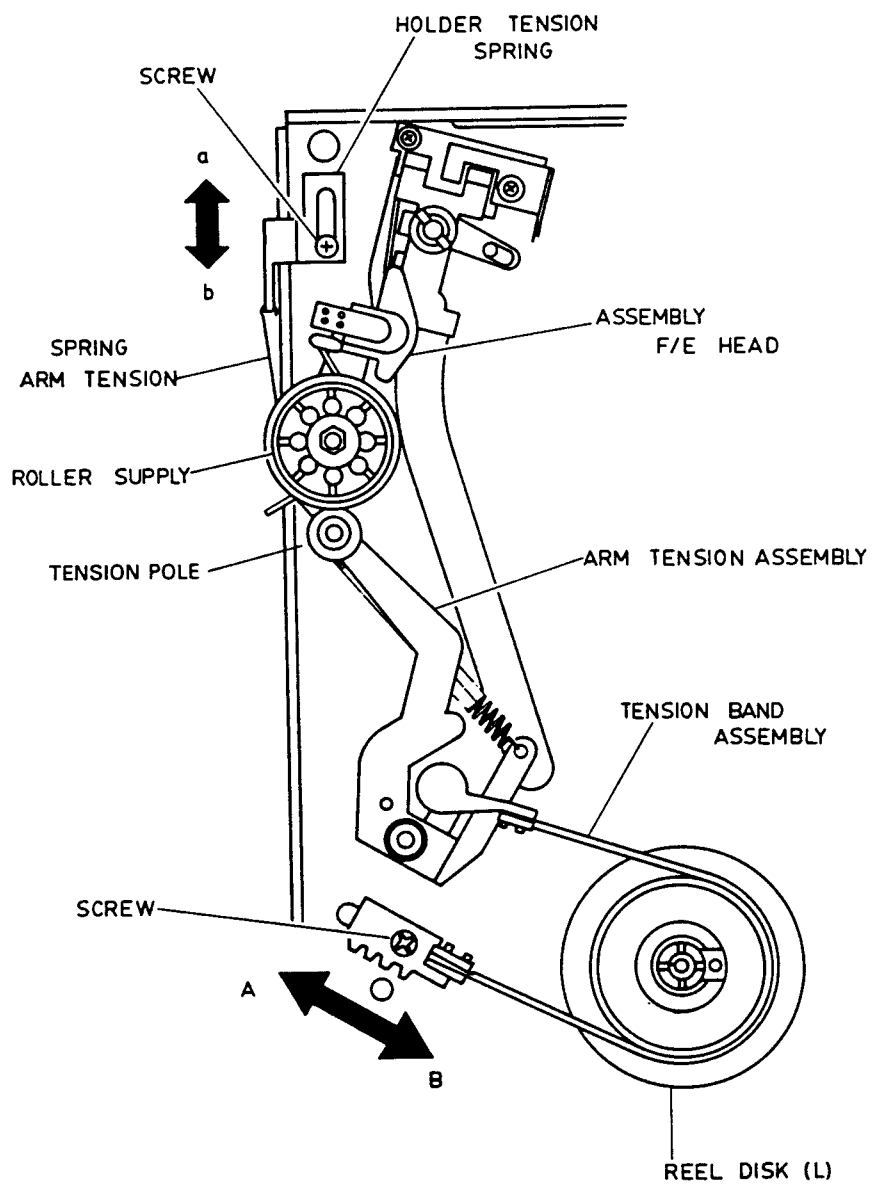


Fig. 3 Arm Tension/Back Tension

3-2. Reel Disk Heights (Fig. 1)

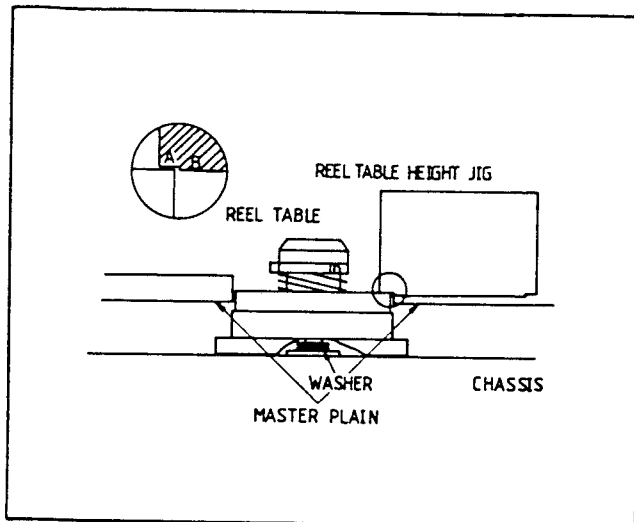


Fig. 1 Reel Disk Height

The height of the supply and take-up turntables should be the same, ± 0.2 mm. Turntable heights are adjusted by changing washer plain stack located under each turntable.

Check turntable heights by installing the Master Plain. Set the Reel Disk Height Jig in place and check the height of the supply and take up turntables. (See Fig. 1.)

The size of washer is 0.13 mm (3.2 mm ID). This washer should be used to achieve equal reference heights for both turntables.

Note: For proper height point "A" should slide over the reel disk and point "B" should not. (Fig. 1)

3-3. Back Tension Adjustment (Fig. 2)

When the back tension is properly adjusted, the service test tape recorded under laboratory conditions) will play back with minimum skew error—picture displacement in line following head switching. The tension is set as follows:

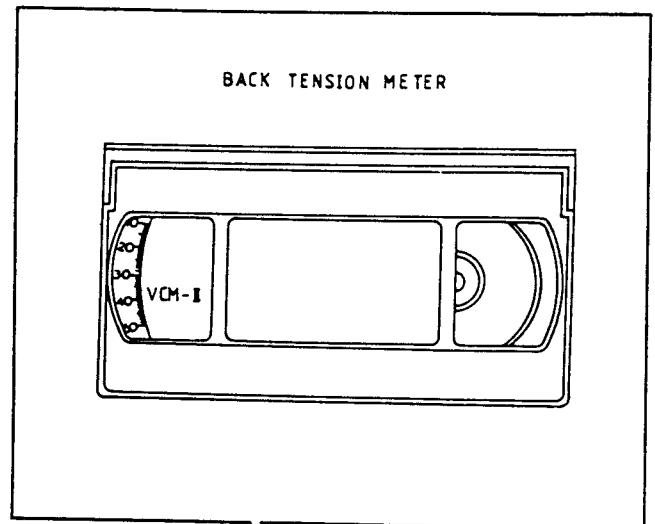


Fig. 2 Back Tension Meter

1. Load the instrument with the back tension adjustment tape.
2. Place the instrument in the "play" mode.
3. Read the scale on the reel disk (S).
4. This reading should be between 39.5 and 44.5
5. After loosening the screw, move the holder tension spring direction "b" when the tension adjustment tape reads 45 or higher, and to the holder tension spring in direction "a" when it is 39 or lower, and adjust the back tension for a nominal reading of 42 on the scale.
6. Recheck the arm tension position when the back tension is changed greatly (6 or more).

Note: The instrument must be in a horizontal position for this adjustment.

3-4. Arm Tension Position Adjustment (Fig. 3)

1. After removing the housing assembly, the tenth mode of the Deck Joint P.C. Board's wafer CN 205 connect to ground. (Refer to page 3-7).
2. Place the instrument in the "play" mode.
3. After loading is complete, loosen the screw holding the holder tension A and adjust so that the clearance between the center of roller supply and the pole tension is 1.6 mm $\sim$ $\begin{matrix} +1.0 \\ -0.5 \end{matrix}$ mm.
4. Tighten screw to secure adjustment.

3-5. Brake Torque Confirmation (Fig. 4)

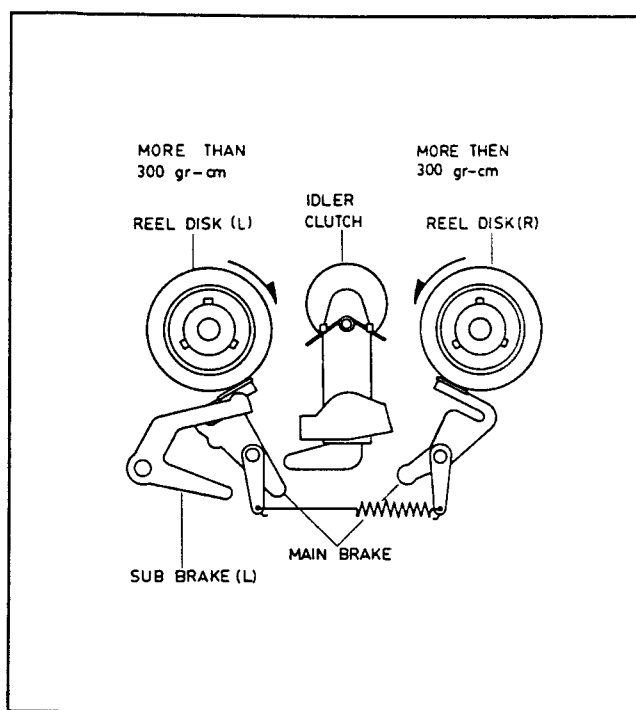


Fig. 4 Main Brake Torque

1. Remove top cover and place instrument in the "stop" mode.
2. Clean the brake surfaces on turntables using "Kim-wipes" and solvent before measuring torque.
3. Attach the torque gauge head to the torque gauge.
4. Place torque gauge on the reel disk (S) turntable.
5. Turn torque gauge in a clockwise direction until the brake begins slipping. Maintain "slipping" rotation and read torque—torque reading should be more than 300 grams—cm.
6. Repeat for the take up side turning the torque gauge counterclockwise—reading should be more than 300 grams—cm.

Note: Brake torque problems can cause tape stretch, broken tape or loose tape wind in cassette. These symptoms can usually be corrected by properly cleaning. If not replace brakes.

3-6. Play, Fast Forward, Rewind Torque Confirmation

1. Place the cassette holder in the loading state without inserting a cassette tape. (Refer to page 3-7)
2. Attach the torque gauge head to the torque gauge.
3. Place torque gauge on the reel disk (T), operate instrument in the "SP Record" mode—torque should measure 150-30 grams—cm.
4. Press Fast Forward button—torque reading should be 600 grams—cm minimum.
5. Place torque gauge on the reel disk (S) and operate instrument in the "rewind" mode—torque reading should be 600 grams—cm minimum.

3-7. Rough Tape Travel Check

Using a blank tape, place the instrument in "play" and note the following.

1. The tape should be in full contact with all tape guide posts.
2. The tape should be crease-free with all tape guide posts.
3. The supply roller should be moving freely.
4. The tape should be perpendicular to the longitudinal axis of the heads when crossing the erase head and the A/C head.
5. The tape should be centered top to bottom on the head when crossing the full erase head.
6. The tape should follow the lower-edge guide surface on the D-D drum.

3-8. Creasing or Slack Tape (Fig. 5)

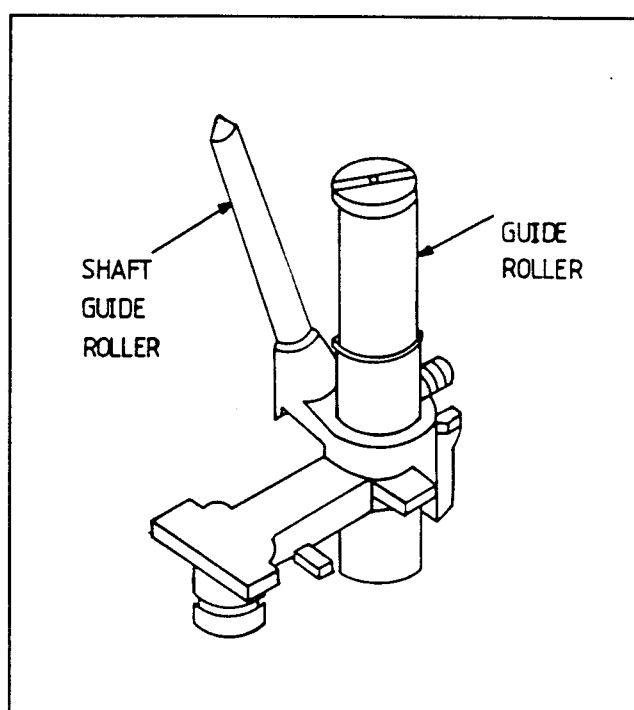


Fig. 5 Creasing or Slack Tape

Load instrument with a blank tape and place in "play" mode. With the tape running, inspect the tape path for creasing or frilling along top or bottom edges of tape. If the tape is creasing or frilling, check the tape as it goes "on" and comes "off" the lower drum.

The tape should follow the lower edge guide surface on the drum. If the tape is high on the guide surface, rough adjust guide rollers to correct this condition (use guide roller adjusting driver)

It will now be necessary to perform guide rollers adjustments and confirm interchangeability.

3-9. Mechanical Interchangeability Considerations

The tape-guide adjustments position the tape so that the prerecorded tracks on the test tape align perfectly with the scan of the video head assembly. The mechanical interchangeability adjustment procedures will insure that a tape recorded on one VHS recorder will play back properly on another machine.

Usually little or no mechanical adjustment is required after routine (head replacement) servicing. Before making any adjustments, perform the following interchangeability confirmation procedure to determine if adjustment is required. If the video heads are replaced, it will also be necessary to confirm the PG shifter adjustment.

If major mechanical servicing was performed (tape guide replacement, etc.) perform "Rough Tape Travel Adjustment" before using test tape.

3-10. Interchangeability Confirmation (Fig. 6)

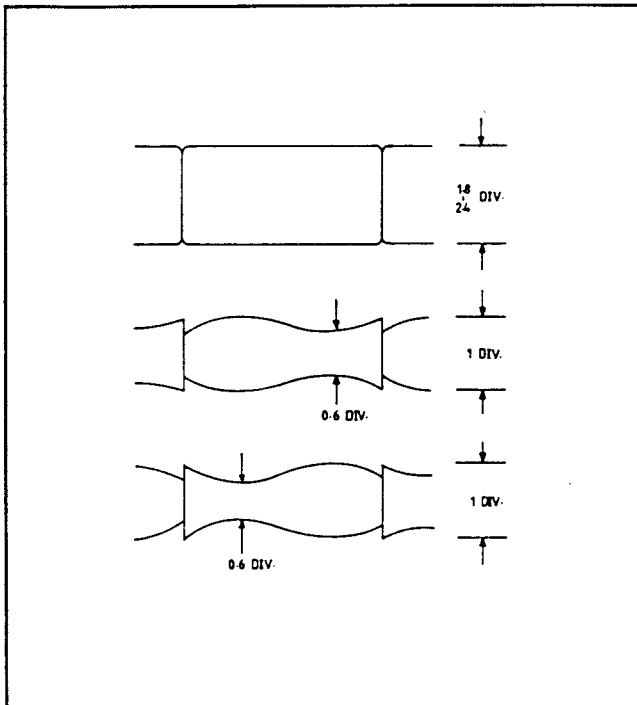


Fig. 6 Interchangeability Confirmation

This confirmation check should be performed after any servicing operation that could adversely affect the tape bath; i.e. D-D drum motor replacement, tape guide replacement, audio/control head replacement, etc.

If unit passes this confirmation check, no tape guide adjustment is required.

Preliminary: This adjustment should be performed after the Tracking Preset adjustment is completed.

1. Connect a channel-1 scope probe (2V/div.; 5ms/div.) to TP201 (MAIN A PCB.) Trigger the scope on channel-1.
2. Connect the channel-2 scope probe (20mV/div.) to 303 (MAIN B PCB; PB FM LEVEL).
3. Play monoscope signal on test tape (Alignment Tape SR1-2, See Jig List).
4. Adjust tracking control (VR701) for maximum FM envelope amplitude (TP 0303 signal) at center of envelope.
5. Adjust scope vertical gain control so that maximum envelope amplitude is 1.8–2.4 graticule divisions.
6. Turn tracking control (VR701) to the left so that maximum envelope amplitude is graticule divisions.
7. Confirm that the minimum envelope amplitude is 0.6 graticule divisions or more at this time.
8. Turn tracking control (VR701) to the right so that maximum envelope amplitude is 1 graticule divisions.
9. Confirm that the minimum envelope amplitude is 0.6 graticule divisions or more at this time.
10. When the confirmation items described above are satisfied, the tape guide adjustment is not necessary. When they are not satisfied, adjust the tape guide.
11. Set tracking control to detent (fixed) position. They adjust Control Track/Audio Head assembly position (X-value) to obtain maximum FM envelope (TP 0303 signal) at the detent position.

Note: If the D-D drum motor assembly has been replaced, perform the following electrical adjustments.

- PG Shifter adjustment
- Record Chroma and Luminance Level adjustments

3-11. Guide Rollers Adjustments (Fig. 7)

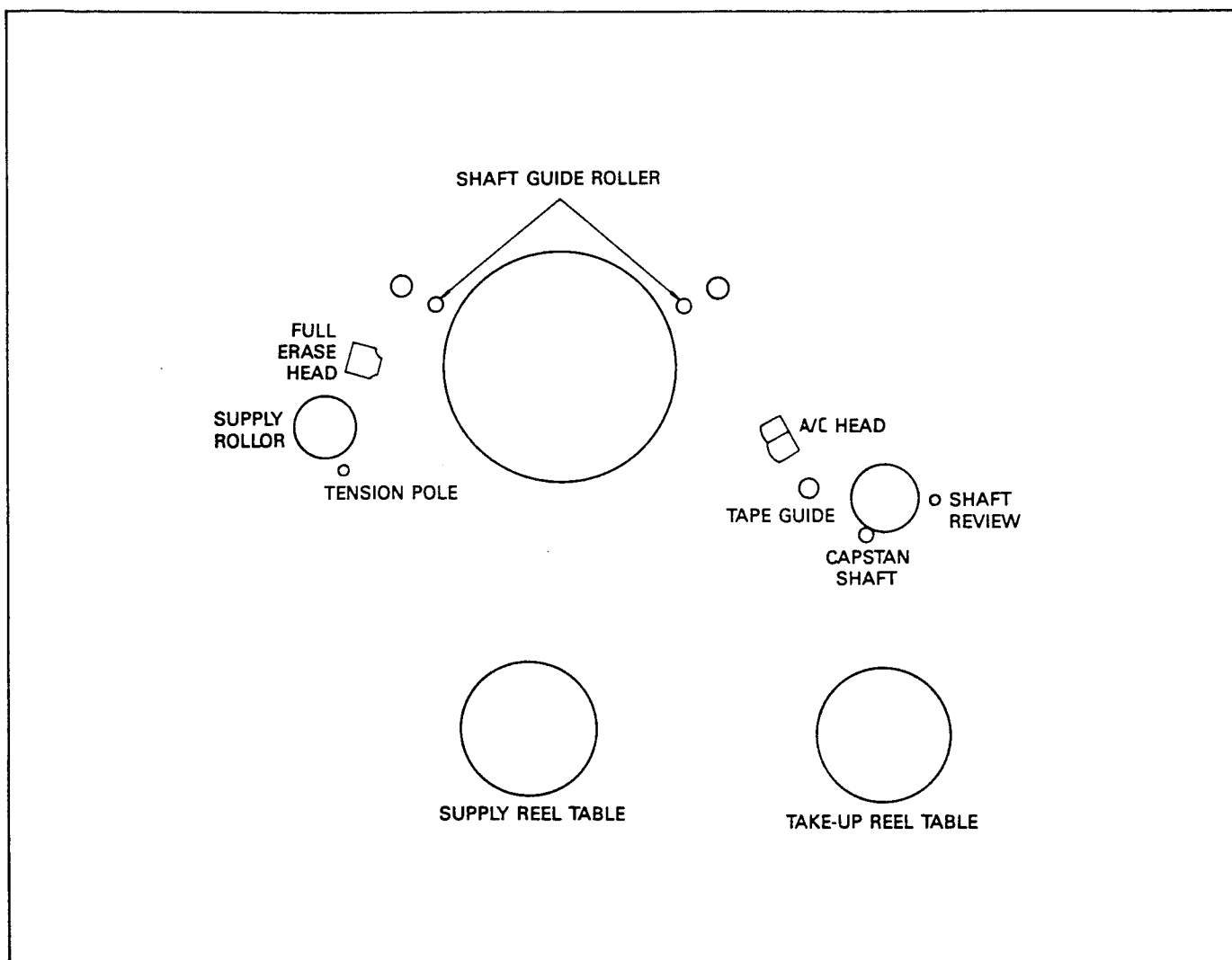


Fig. 7 Tape Guides

1. Connect channel-1 scope probe (2V/div.; 5ms/div.) to TP201. Trigger the scope on channel-1.
2. Connect channel-2 scope probe (10mV/div.) to TP 0303 (Main B PCB; PB FM LEVEL).
3. Set tracking control to detent (fixed) position and play back test tape monoscope signal. (Alignment tape SR1-2. Ref. Jig List). Loosen set screw on pole base of guide rollers.
4. Adjust guide roller down using guide roller adjusting driver (CW) until bottom edge of tape slightly bows the bottom of tape guide.
5. Monitor the head FM envelope at TP 0303
6. Raise (CCW) guide roller (right guide) to obtain maximum amplitude at right side of head envelope.
7. Raise (CCW) guide roller (left guide) to obtain maximum amplitude at left side of Head envelope.
8. Adjust tracking control (VR701) for best envelope.
9. Touch up guide rollers for maximum amplitude flat envelope. Tighten set screw at pole base of guide rollers.
10. Adjust control head position (if necessary) to move the best envelope condition to the tracking control detent position.

Note: In the event that correct head envelope is not obtainable, check Audio/Control (A/C) head adjustments.

3-12. Audio/Control Head (Height/Tilt/Azimuth) (Fig. 8)

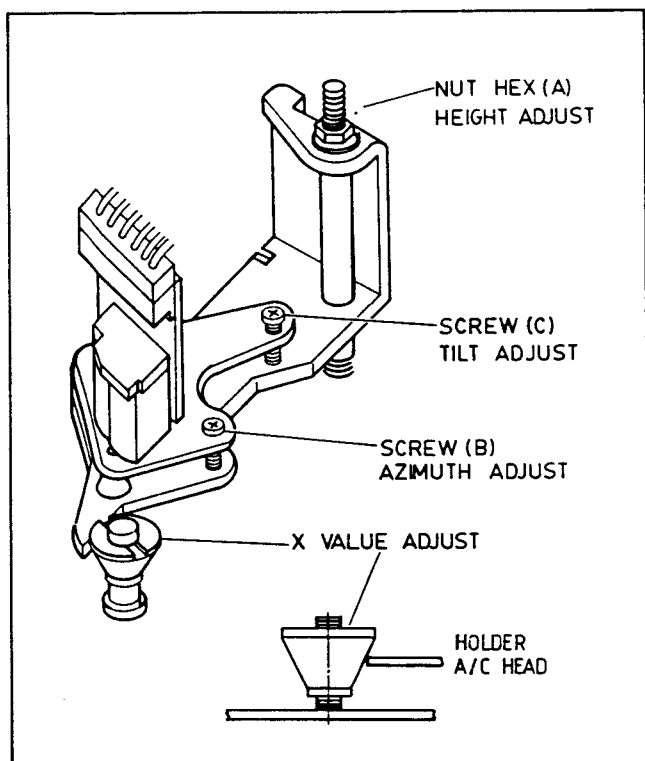


Fig. 8 Audio/Control Head Assembly

1. Connect a scope probe (0.5V/div.; 1ms/div.) to TP0502 (Use audio out jack) located on the main circuit board.
2. Play back a 1-KHz (color bars) audio signal on test tape (Alignment Tape SR 2-2. See Jig List)
3. Alternately adjust height nut (A) and tilt screw (C) for maximum output.
4. Play back a 6-KHz audio signal on test tape. (Alignment Tape SR 1-2. See Jig List)
5. Adjust azimuth screw (B) for maximum output.
6. Repeat steps 3 and 5 for maximum 6-KHz and 1-KHz output.
7. Lock the A/C Head (A) with paint.

3-13 Audio/Control Head (AC Head Horizontal Position) (Fig. 8)

This adjustment establishes proper tape tracking when the tracking control (VR701) is in its detent position.

Note: This adjustment should only be made after the tracking adjustment is completed. (See Electrical Adjustments.)

1. Connect a scope probe (10mV/div.; 5ms/div.) to TP 0303 (MAIN B PCB; PB FM LEVEL).
2. Set tracking control (VR701) to the detent (fixed) position.

3. Play back monoscope signal on test tape. (Alignment tape SR 1-2. See Jig List)
4. Carefully move the A/C head base plate in either direction for maximum head envelope output by adjusting the X-value screw.

3-14. Operating The VCR without Inserting a Cassette Tape (Fig. 9)

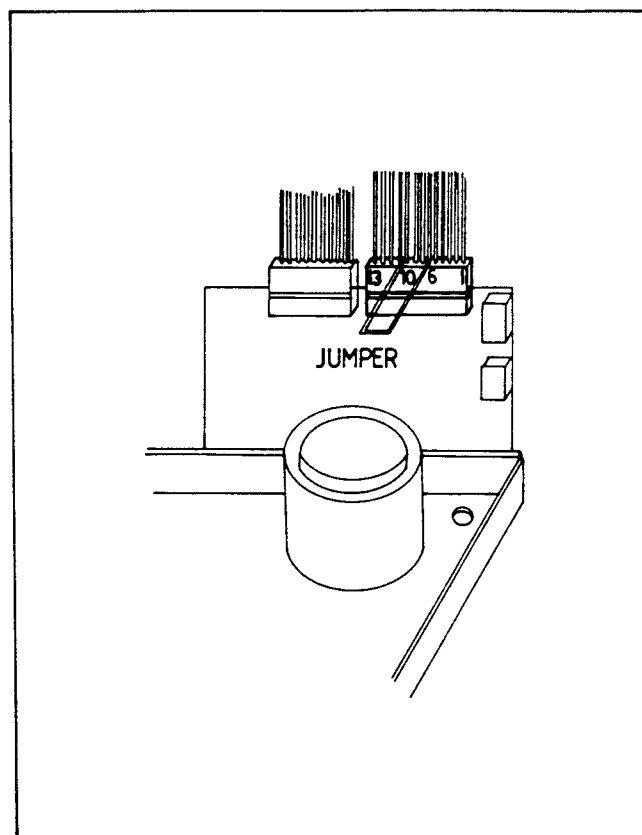


Fig. 9

1. Remove the top cover.
2. Remove the housing assembly (Fig. 12)
3. Plug the power cord of the VCR into the AC outlet.
4. Turn "on" the power switch of the VCR.
5. Connect a jumper between pins 6 and 10 of connector.
6. The above procedure enables the VCR to operate without loading a cassette tape.

Note: Operate the play or record button in order to place the VCR in the record mode or in the play mode.

4. ELECTRICAL ADJUSTMENTS

4-1. Circuit Board Location and Identification (Fig. 1, 2)

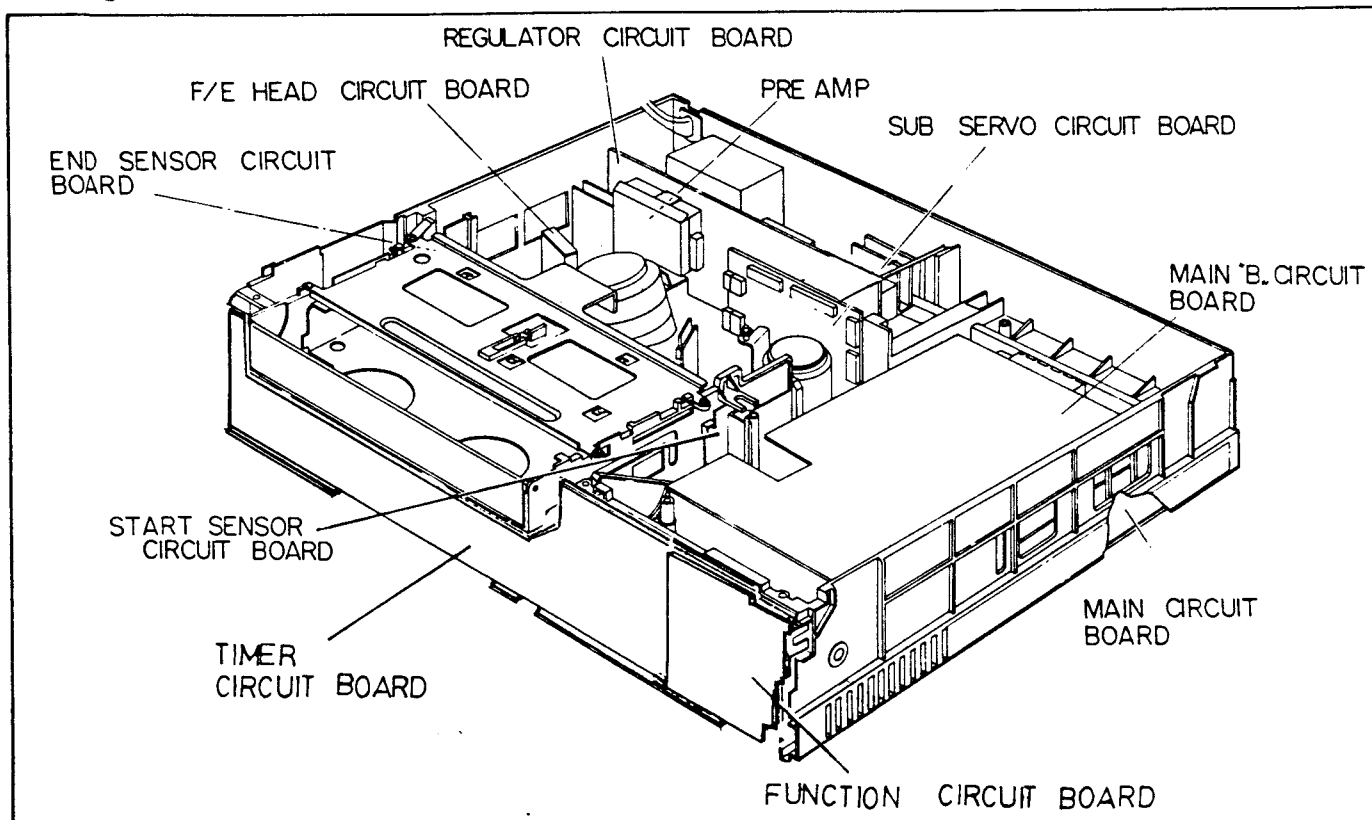


Fig. 1 Top View

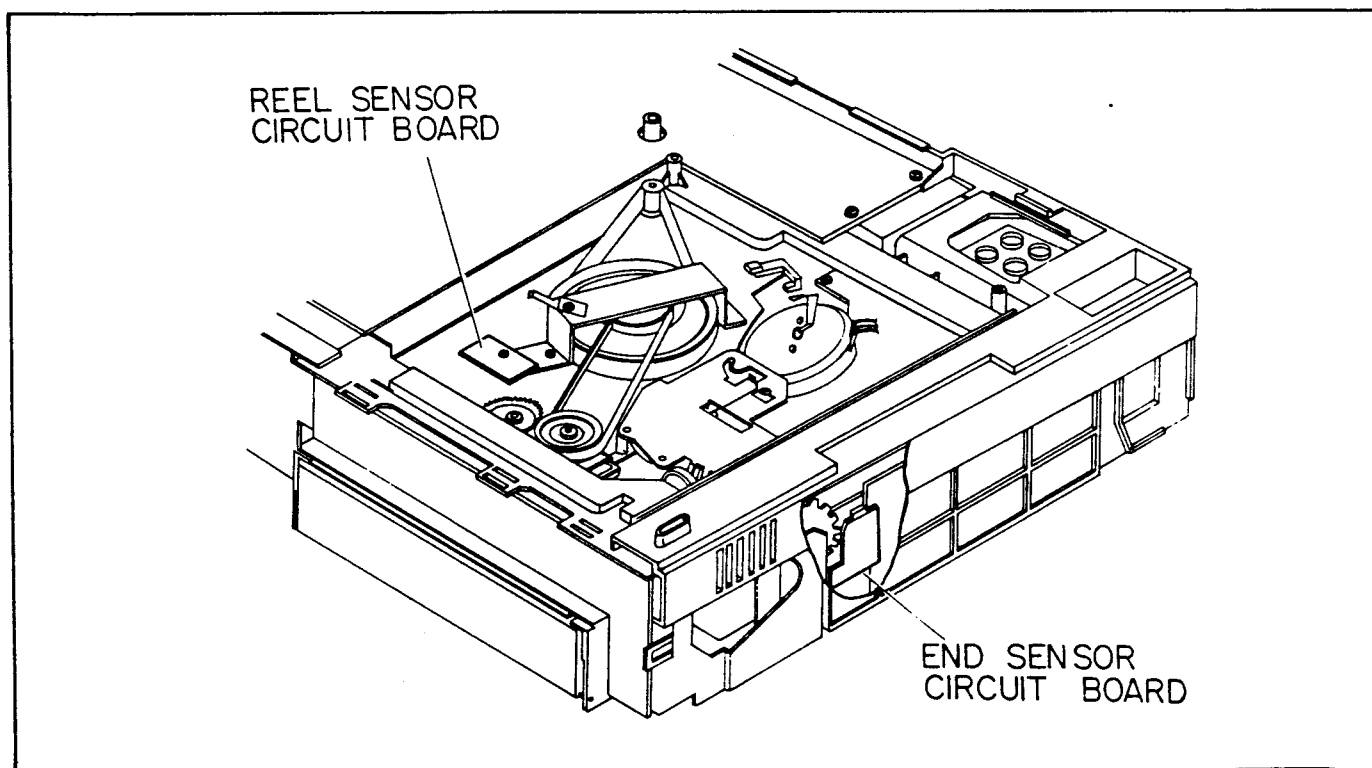


Fig. 2 Bottom View

4-2. SERVO SECTION in Main. A PCB

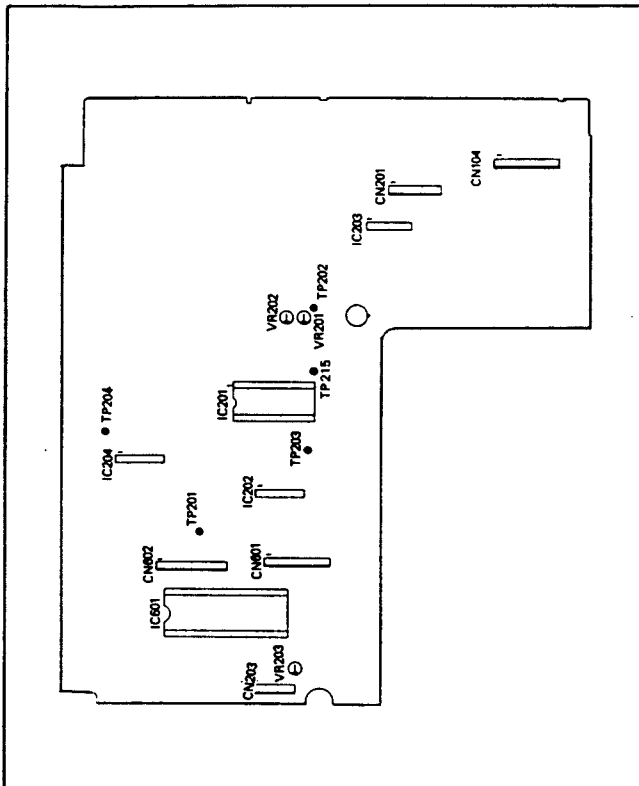


Fig. 3 SERVO SECTION in Main A PCB-Component Side

4-2-1. PG (Pulse Generator) Shifter Adjustment

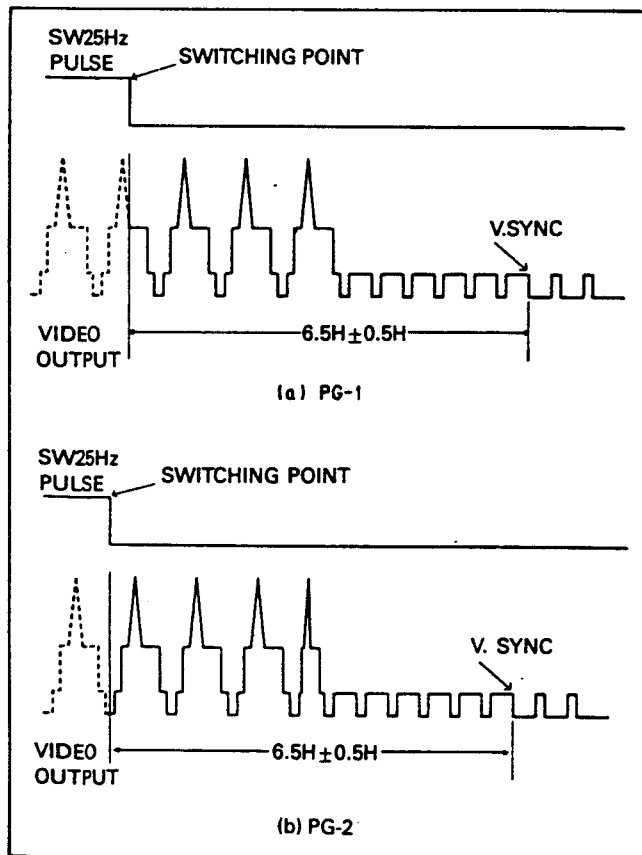


Fig. 4 PG Shifter

Equipment: Oscilloscope

Test points: TP201 (SW 25Hz)

TP0302 (Video Output Signal)

Adjust: VR201 (PG-1)

VR202 (PG-2)

Main. A

Main. B

Main. A

Main. A

The Pulse Generator (PG) Shifter determines the video head switching point during playback. Misadjustment of the PG Shifter may cause head switching noise in the picture and/or vertical jitter.

- 1) Load the instrument with an alignment tape and playback the color bar signal or monoscope signal. (Alignment Tape SR2-2).
- 2) Connect a channel-1 scope probe (1V/div.; 50 μ s/div.) to TP201. Trigger the scope on channel-1.
- 3) Connect the channel-2 scope probe (1V/div.) to TP0302.
- 4) Set the scope to (+) slope and adjust the PG-1 shifter control (VR201) so that the trailing edge of the SW 25Hz pulse is placed $6.5H \pm 0.5H$ (horizontal) lines before the start of vertical sync pulse.
- 5) And then, set the scope to (-) slope and adjust the PG-2 Shifter control (VR202) as in the PG-1. (Fig. 4)

4-2-2. Tracking Preset Adjustment

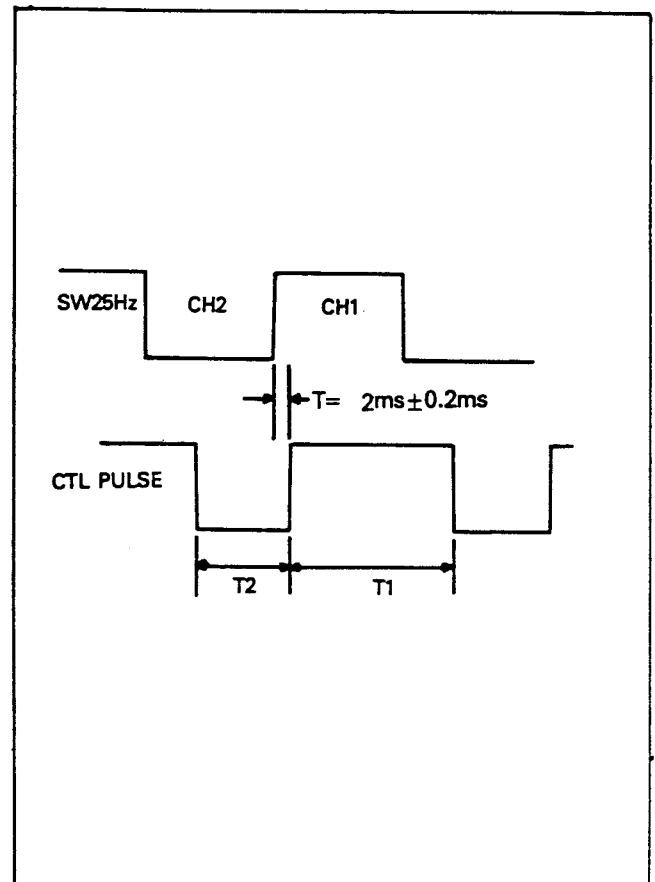


Fig. 5 Tracking Preset

Equipment: Oscilloscope
 Test Points: TP201 (SW 25Hz) Main. A
 TP215 (CTL Pulse) Main, A
 Adjust: VR203 (Tracking Preset) Main. A

This adjustment sets the optimum tracking during playback of a tape recorded on this instrument so that it occurs at the detented position of the Tracking control (VR701).

- 1) Load the instrument with an alignment tape and playback the color bar signal. (Alignment Tape SR1-2).
- 2) Connect a channel-1 scope probe (2V/div.; 5ms/div.) to TP201. Trigger the scope on channel-1.
- 3) Connect the channel-2 scope probe (2V/div.) to TP215.
- 4) Set the Tracking Control (VR701) on the front panel to the detented position and adjust the Tracking Preset Control (VR203) to align the pulse width $T=2.0\text{ms}+0.2\text{ms}$. (Fig. 5)

Note: Make sure that $T_1 > T_2$. If not, change the order of the CTL head wire for the correct SERVO adjustment.

4-2-3. Vertical Lock Pulse Adjustment

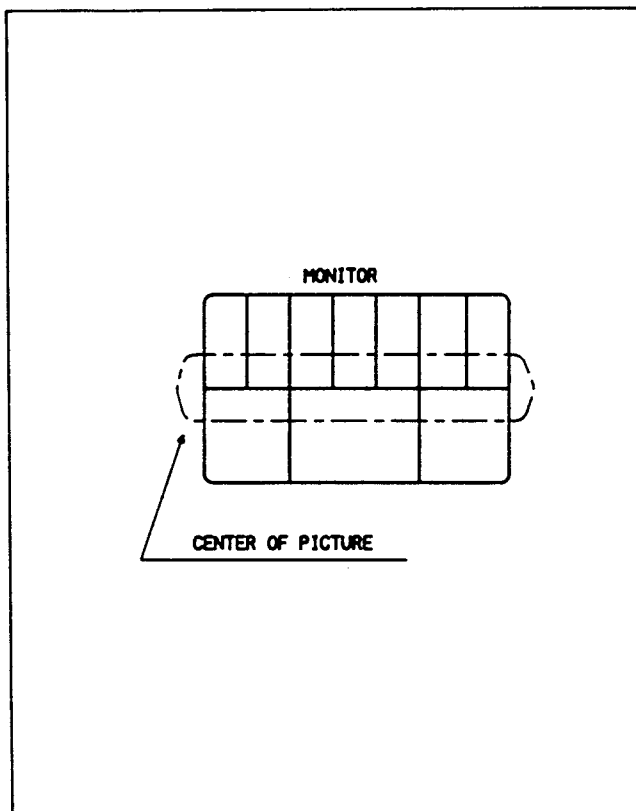


Fig. 6 Vertical Lock Pulse

Equipment: TV monitor
 Adjust: VR702 Timer

This adjustment is to prevent vertically unstable picture in Pause mode.

- 1) Apply a PAL color bar signal to the Video Input jack (BNC) on the rear panel.
- 2) Rotate the input selected S/W to AUX.
- 3) Insert a blank tape and make a recording for a few minutes.
- 4) Playback in PAUSE/STILL mode.
- 5) Adjust the V-Lock Control VR702 so that the center of picture is most stable. (Fig. 6).

4-3. AUDIO SECTION in Main. B PCB

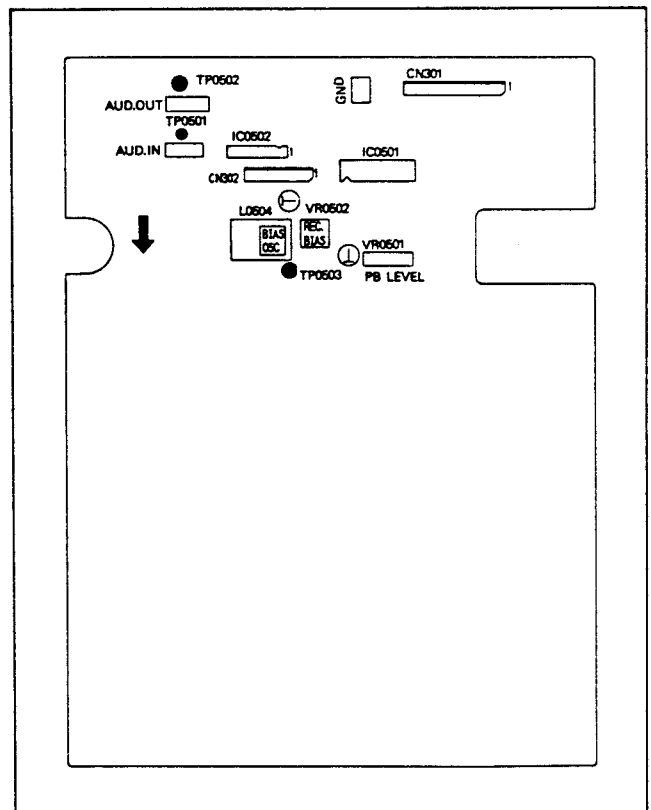


Fig. 7 AUDIO SECTION in Main PCB-Component Side

4-3-1. Audio PB Level Adjustment

Equipment: AC Voltmeter
Test Points: TP0502 (Audio Output) Main. B
Adjust: VR0501 (Audio PB Level Control) Main. B

This adjustment sets the output level of the audio signal to the specified level.

- 1) Connect a AC Voltmeter (0dB=1 Vrms) to TP0502.
- 2) Load the instrument with an alignment tape and playback the 1KHz audio signal. (Alignment Tape SR2-2).
- 3) Adjust the Audio Playback Level Control (VR0501) for 500mVrms.

4-3-2. Audio Bias Level Adjustment

Equipment: Oscilloscope
Test Points: TP0503 (Rec Bias Level) Main. B
Adjust: VR0502 (Audio Bias Level Control) Main. B

This adjustment optimizes the audio record bias. When the audio record bias is too low, high frequencies are increased resulting in distortion. When the level is too high, high frequencies are attenuated.

- 1) Connect a channel-1 scope probe (10V/div.; 10us/div.) to TP0503.
- 2) Load the instrument with a blank tape and place in the SP record mode with no signal.
- 3) Adjust the Audio Bias Level Control (VR0502) for 40 Vp-p±1Vp-p.

4-4. LUMI/CHROMA SECTION in Main B.

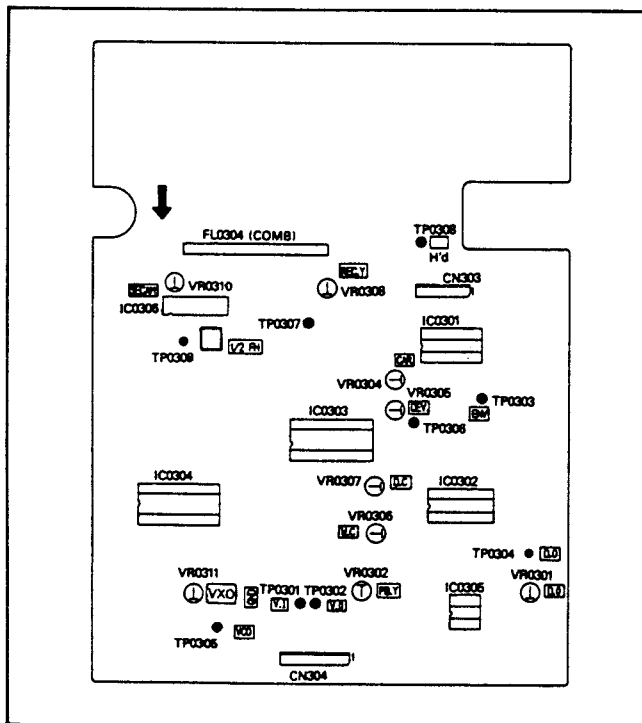


Fig. 8 LUMI CHROMA SECTION in Main. B Component Side

4-4-1. PB Luminance Level Adjustment

Equipment: Oscilloscope
Test Point: TP0302 (Video Output Level) Main. B
Adjust: VR0302 (PB Luminance Level Control) Main. B

This adjustment sets the output level of the video signal to the specified level.

- 1) Connect a channel-1 scope probe (0.5V.; 10μs/div.) to TP0302.
- 2) Load the instrument with an alignment tape and playback the color bar signal. (Alignment Tape SR2-2).
- 3) Adjust the PB Luminance Level Control (VR0302) for 2Vp-p.

4-4-2. CCD IN (Clamp) Adjustment

Equipment: Oscilloscope
Test Point: TP0304 (CCD Video Level) Main. B
Adjust: VR0301 (CCD Level Control) Main. B

This adjustment is for the compensation of the Drop Out. When there is the Drop Out, if the CCD output level is very low, the Black Trigger occurs. If the level is very high, the White Trigger occurs.

- 1) Connect a channel-1 scope probe (0.1V/div.) to TP0304.
- 2) Load the instrument with an alignment tape and playback the color bar signal. (Alignment Tape SR2-2).
- 3) Adjust the CCD IN Control (VR0301) for 0.6Vp-p.

4-4-3. Sub Carrier Frequency (4.43 MHz) Adjustment

Equipment: Frequency Counter
Test Point: TP0305 (VXO OUT) Main. B
Adjust: VR0311 (Sub Carrier Frequency) Main. B

This adjustment sets the 4.43MHz VXO oscillation frequency accurately.

When this adjustment is incomplete, 1H delay of the video signal is disabled and the S/N deteriorates.

- 1) Connect a frequency counter to TP0305.
- 2) Load the instrument with an alignment tape (Alignment Tape SR2-2) and play it back.
- 3) Adjust the Sub Carrier Frequency Control (VR0311) so that the frequency reads 4.433619MHz±10Hz.

4-4-4. White & Dark Clip Adjustment

Equipment: PAL TV TEST SIGNAL GENERATOR
Oscilloscope
Test Point: TP0306 (Video White/Dark Clip Level) Main. B
Adjust: VR0306 (White Clip) Main. B
VR0307 (Dark Clip) Main. B

This adjustment is used to prevent Overmodulation. If the adjustment is over the accurate point, the White/Dark Clip occurs in playback and the S/N ratio decreases for the AM elements intermixed.

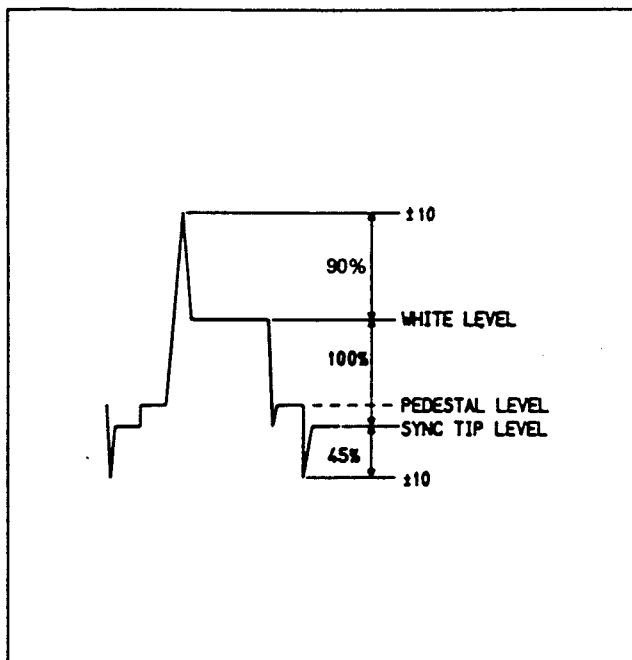


Fig. 9 White and Dark Clip Adjustment

- 1) Apply a PAL color bar signal to the video input jack on the rear panel.
- 2) Connect a channel-1 scope probe (0.2V/div.; 20 μ s/div.) to TP0306.
- 3) Insert a blank tape and make a recording.
- 4) Adjust the White Clip Control (VR0306) and Dark Clip Control (VR0307) so that the overshoot and undershoot are as shown in Fig. 9.

4-4-5. FM Carrier & Deviation Adjustment

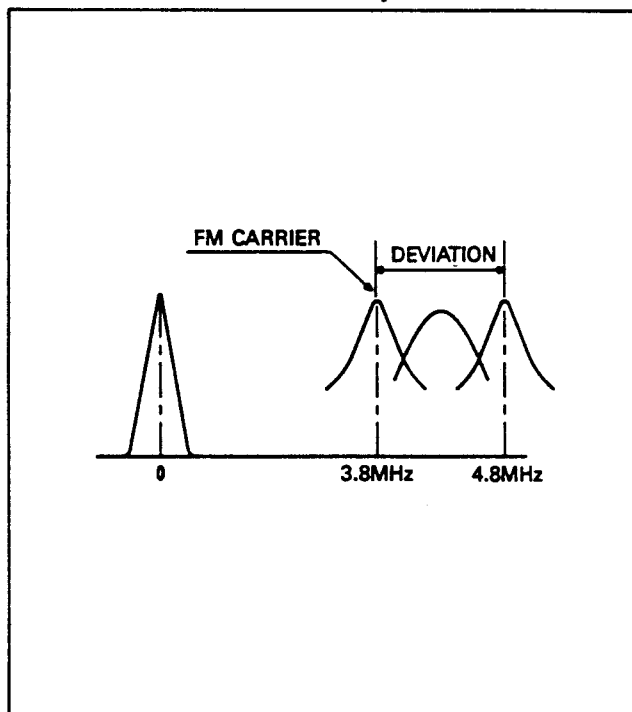


Fig. 10 FM Carrier & Deviation Adjustment

Equipment: Tracking Scope
 Test Point: TP0307 (FM Output)
 Adjust: VR0304 (FM Carrier)
 VR0305 (Deviation)

Main. B
 Main. B
 Main. B

This adjustment sets the frequencies of the FM Carrier and Deviation.

If the Deviation is less than 1MHz, the Video output level is low. When the Deviation is more than 1MHz, the output level is high and there is the Overmodulation, So the screen has the White/Dark Trigger and the S/N ratio is not good.

- 1) Apply a 100% White signal to the video input jack on the rear panel.
- 2) Rotate the input selected S/W to AUX.
- 3) Connect a Tracking Scope to TP0307.
- 4) Insert a blank tape and make a recording.
- 5) Adjust the FM Carrier Control (VR0304) so that the frequency is $3.8\text{MHz} \pm 0.1\text{MHz}$.
- 6) And then adjust the Deviation Control (VR0305) so that the frequency is $4.8\text{MHz} \pm 0.1\text{MHz}$ for the 1MHz deviation. (See Fig. 10).

4-4-6. REC FM Current Level Adjustment

Equipment: Oscilloscope
 Test Point: TP0310
 Adjustment: VR0308

PRE AMP
 Main. B

- 1) Apply a PAL color bar signal to the video input jack to the rear panel.
- 2) Rotate the input selected S/W to AUX.
- 3) Connect a channel-1 scope probe (1V/div. 20ms/Div) to TP0310.
- 4) Insert a blank tape and make a recording.
- 5) Adjust the FM current control VR0308 so that the current is 5Vp-p.

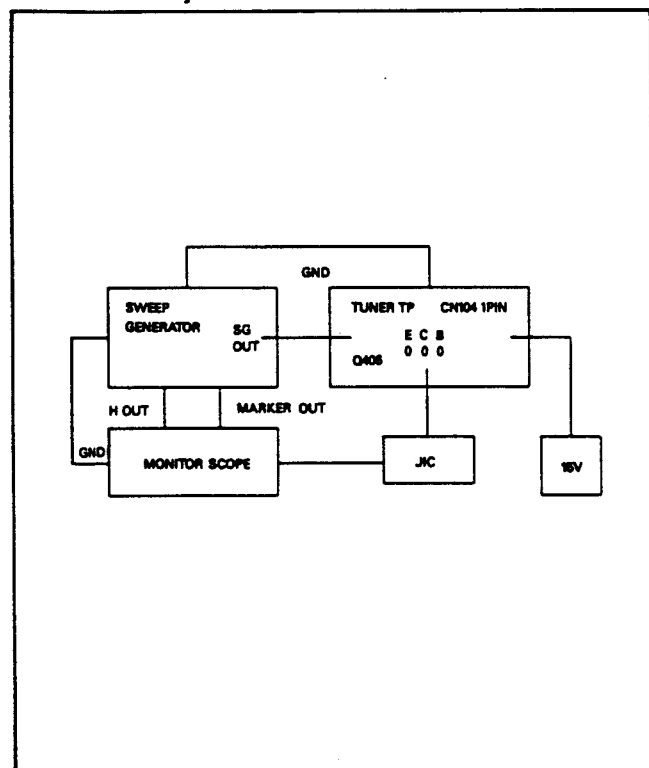
4-4-7. SECAM Detector Adjustment

Equipment: Oscilloscope
 Test Point: TP0309
 Adjustment: VR0310

Main. B
 Main. B

- 1) Apply a SECAM signal to the video input jack to the rear panel
- 2) Rotate the input selected S/W to AUX.
- 3) Connect a channel-1 scope probe (1V/Div) to TP0309
- 4) Insert a blank tape and make a recording.
- 5) Adjust the output to 5Vp-p.

4-5-1. TRAP Adjustment



Equipment: Sweep Generator
Test points: Tuner Q406 collector
Adjustment: FL408, FL407

- 1) Place the instrument in the E-E Mode.
- 2) Remove a connector CN101 and connect a DC bias supply of 15V to the pin 1 of a connector CN104 on the Main. A PCB.
- 3) Connect the Sweep Generator output to tuner TP within the tuner unit. (Fig. 12)
- 4) Connect a jig input to the collector of Q406
- 5) Adjust the trap (FL408, FL407) in the Tuner unit shown in Fig 13.

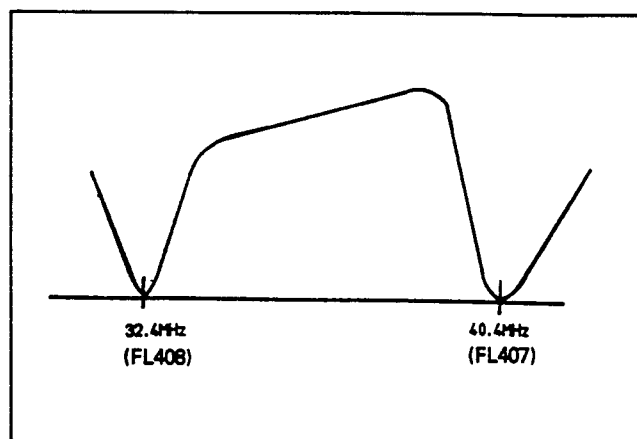


Fig. 13 Trap Adjustment

4-5-2. VIF Adjustment

Equipment: Sweep Generator
Monitorscope

Test Point:	TP406 (Video output)	Main. A
Adjust:	FL405 (VIF-DET TANK)	Main. A

This adjustment makes the sync detecting reference signal tuning circuit of the picture-IF circuit resonate with 38.9MHz and suppresses mixture of the sound-IF signal.

- 1) Place the instrument in the E-E mode.
- 2) Remove a connector CN101 and connect a DC bias supply of 15V, 12V to the pin 1,2 of a connector CN104 on the Main. A PCB.
- 3) Connect a DC bias supply of 5V to TP405.
- 4) Connect the Sweep Generator Output to tuner TP within the Tuner unit. (Fig. 14)
- 5) Connect a Monitor Scope Input to TP406.
- 6) Connect a $100\ \Omega$ damping resistor between TP403 and TP404.
- 7) Adjust the Core (FL410) in the Tuner section shown in Fig. 15.
- 8) Remove a $100\ \Omega$ damping resistor.
- 9) Adjust the VIF Control (FL405) for maximum detection of 38.9MHz marker. (Fig. 16)

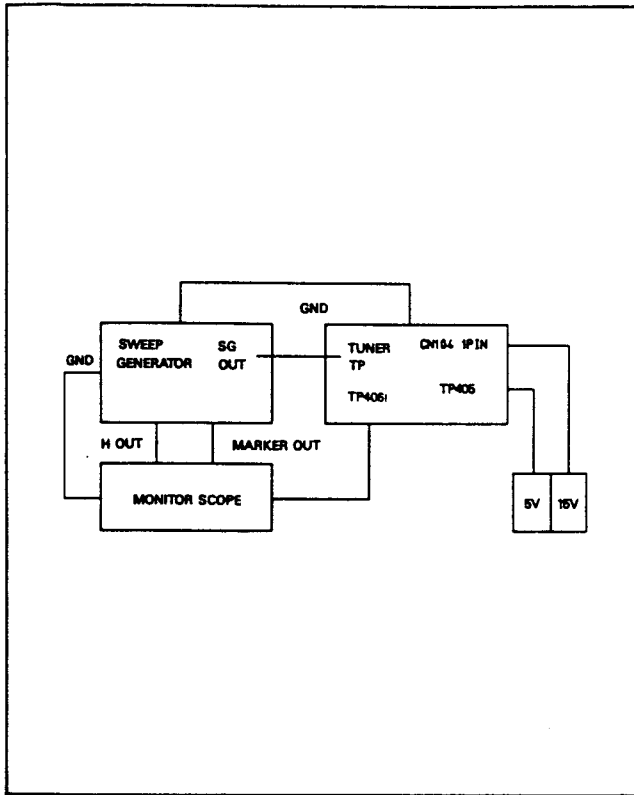


Fig. 14 Composition for VIF Adjustment

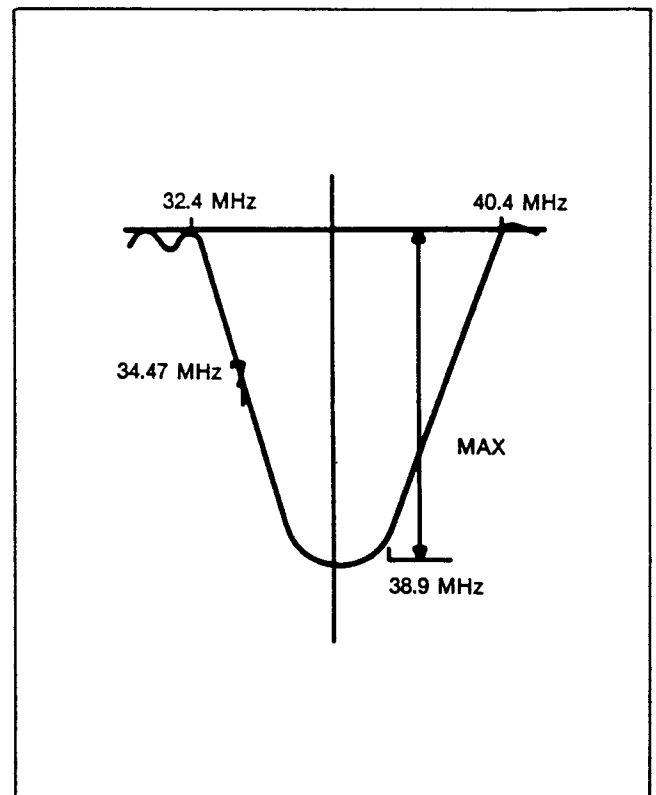


Fig. 16 VIF 38.9MHz Maximum Detection

4-5-3. AFT Adjustment

Equipment: Sweep generator, Monitorscope

Test point: TP402

Main. A

Adjustment: FL404

Main. A

- 1) After adjustment of VIF, connect the monitorscope input to TP402.
- 2) Adjust the AFT (FL404) in the Tuner unit shown in Fig. 17

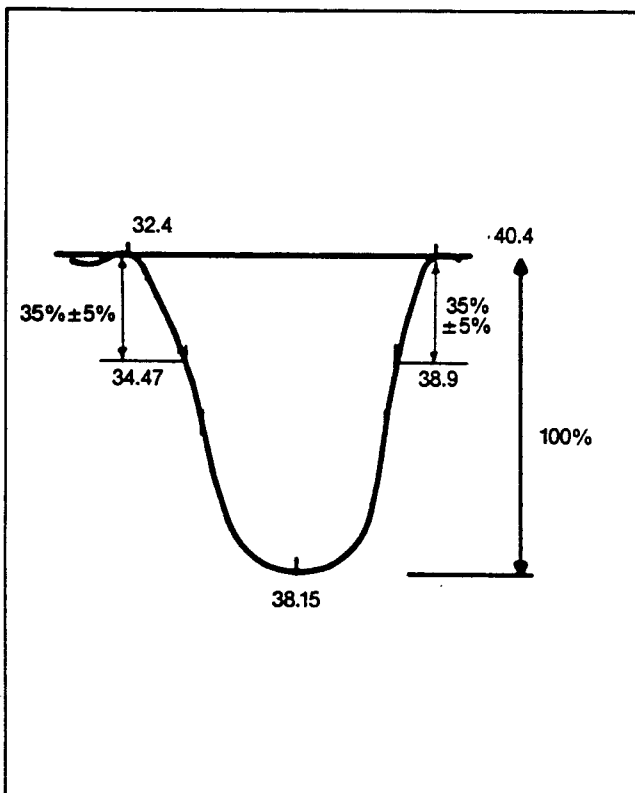


Fig. 15 Illustration for balance between 38.9 MHz and color signal

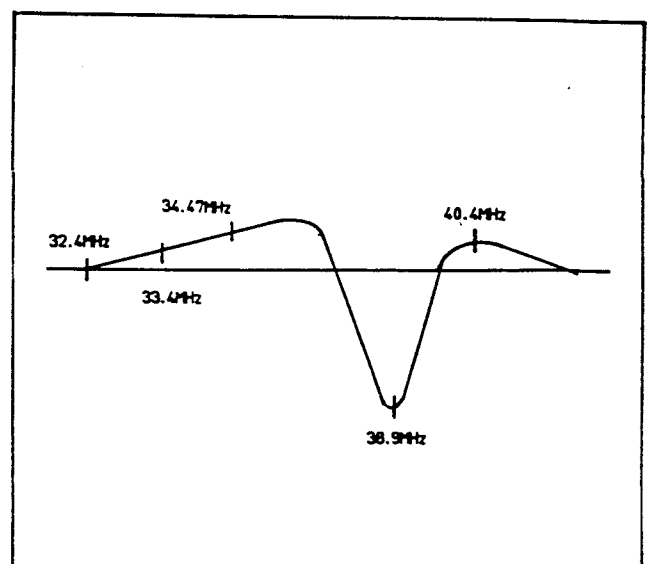


Fig. 17 AFT Adjustment

4-5-4. SIF Adjustment

Equipment: Oscilloscope
Test points: TP0501 (Audio Input) Main. B
Adjust: FL403 (5.5MHz Tuning Coil) Main. A

This adjustment suppresses the audio distortion and optimizes the linearity response of audio. Misadjustment of the SIF may cause the audio buzz by the increasing of the THD (Total Harmonic Distortion).

- 1) Apply a 1KHz audio signal to the RF Input Terminal on the rear panel.
- 2) Connect a channel-1 scope probe (0.2V/div.) to TP0501.
- 3) Adjust the SIF Control (FL403) for 1.0Vp-p.

4-5-5. RF AGC Adjustment

Equipment: TV CHANNEL SIGNAL GENERATOR
Oscilloscope or DC Voltmeter
Test Point: TP401 (Tuner RF AGC Input) Main. A
Adjust: VR401 (RF AGC Control) Main. A

This adjustment determines the point where the AGC is activated.

- 1) Apply a PAL color bar signal to the Video Input Terminal of the TV Channel Signal Generator. (Fig. 18)
- 2) Set the Channel Selector to CH2 (52.25 MHz)
- 3) Apply the Output of the Generator to the RF IN Terminal on the rear panel. Using the Attenuator, adjust the input signal level for 70dB μ measured at the RF IN Terminal. (Fig. 18)
- 4) Connect a channel-1 scope probe (1V/div.) to TP401.
- 5) Turn the VCR power on and select TV Mode with SW709.
- 6) Set the channel on the front panel to CH 2.
- 7) Adjust the RF AGC Control (VR401) for $4.7V \pm 0.1V$.
- 8) After adjusting the input level of the RF IN terminal for 60dB μ , check the condition of screen. If there is some Noise, adjust VR401 so that the Noise disappears.

- 9) And adjust the input level of the RF IN Terminal for 100dB μ , then check the condition of screen. If there are some Saturations (unstable picture or color, etc), adjust VR401 again so that the Saturation phenomenon disappear.

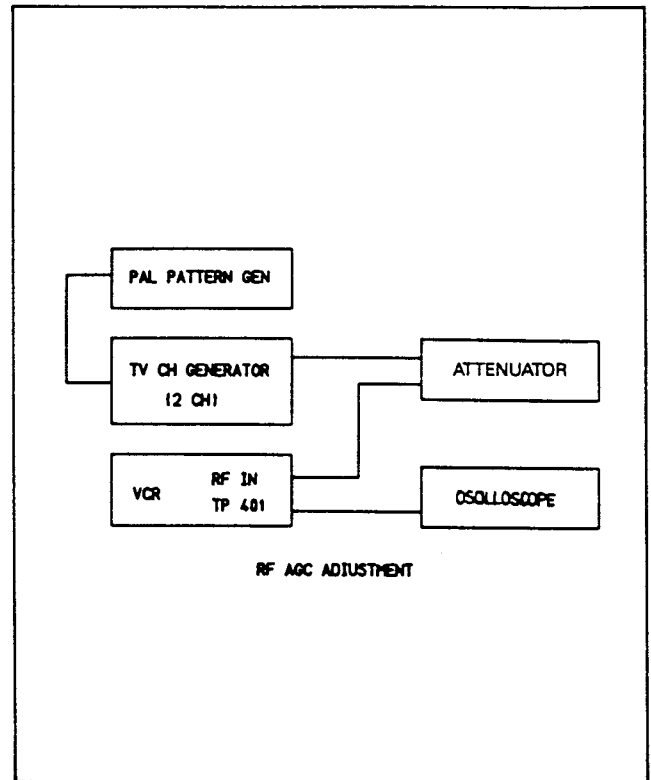
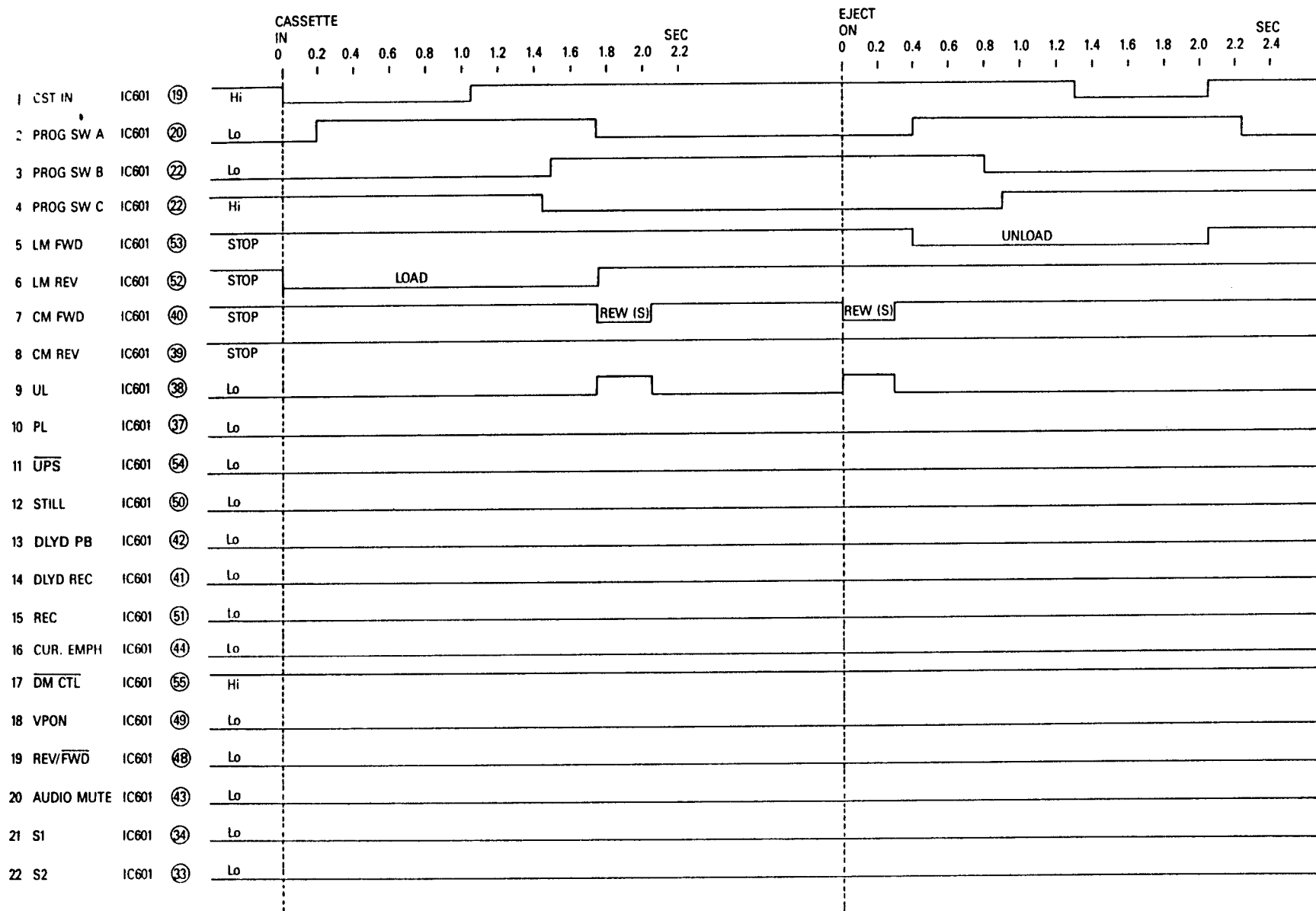


Fig. 18 RF AGC Adjustment

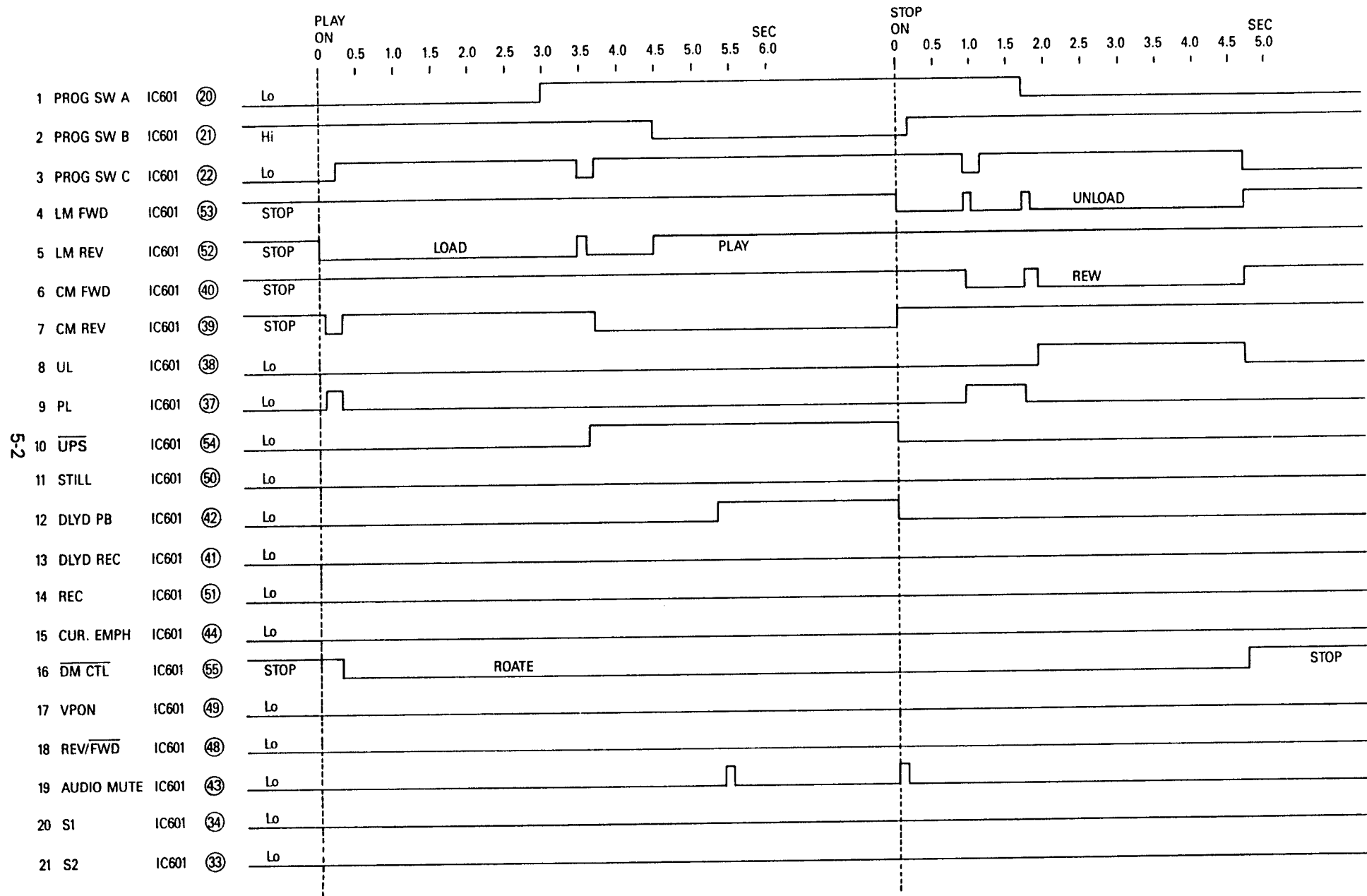
5. TIMING CHART/TROUBLESHOOTING GUIDER

5-1. Timing chart

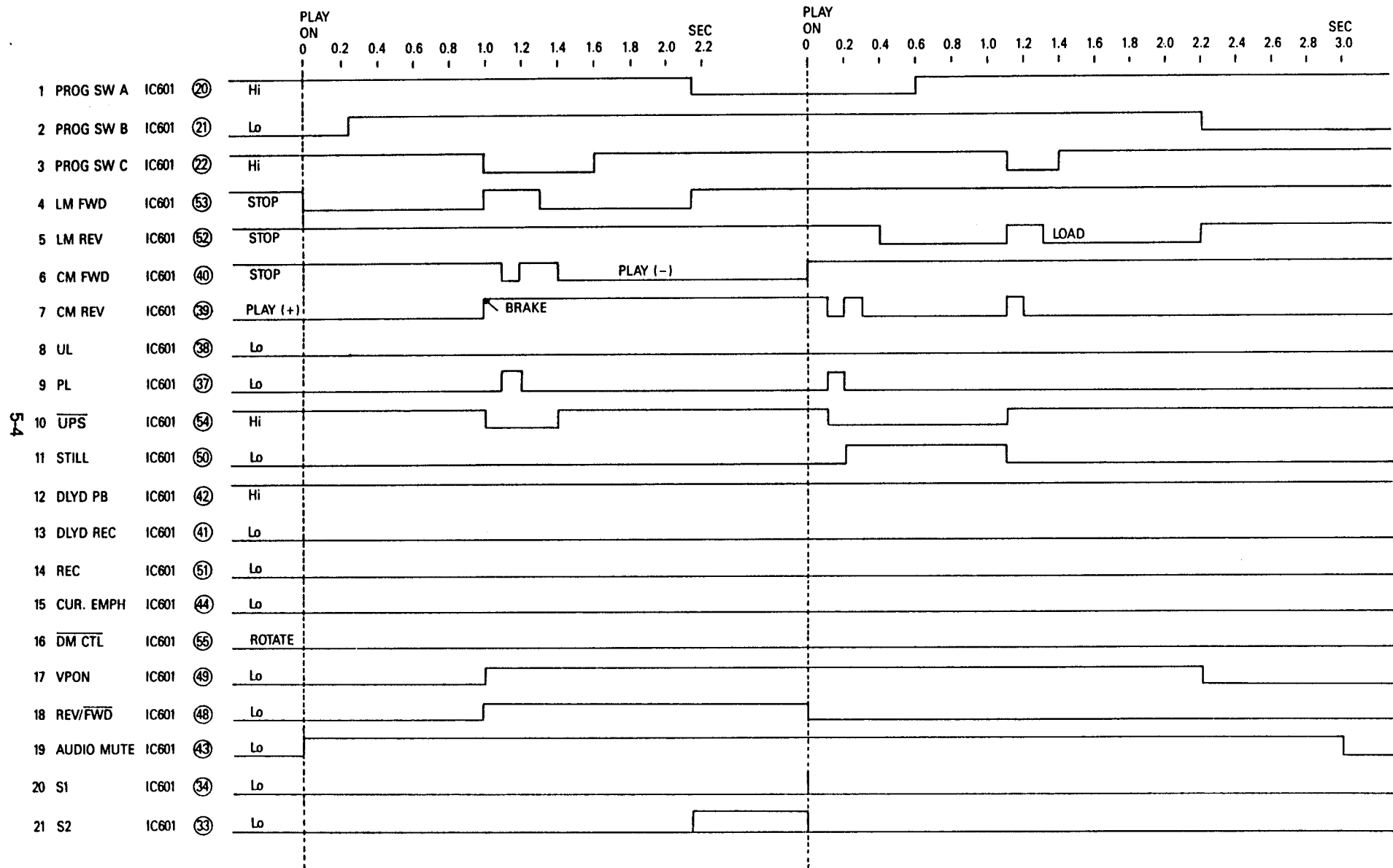
5-1-1. CASSETTE LOAD/UNLOAD



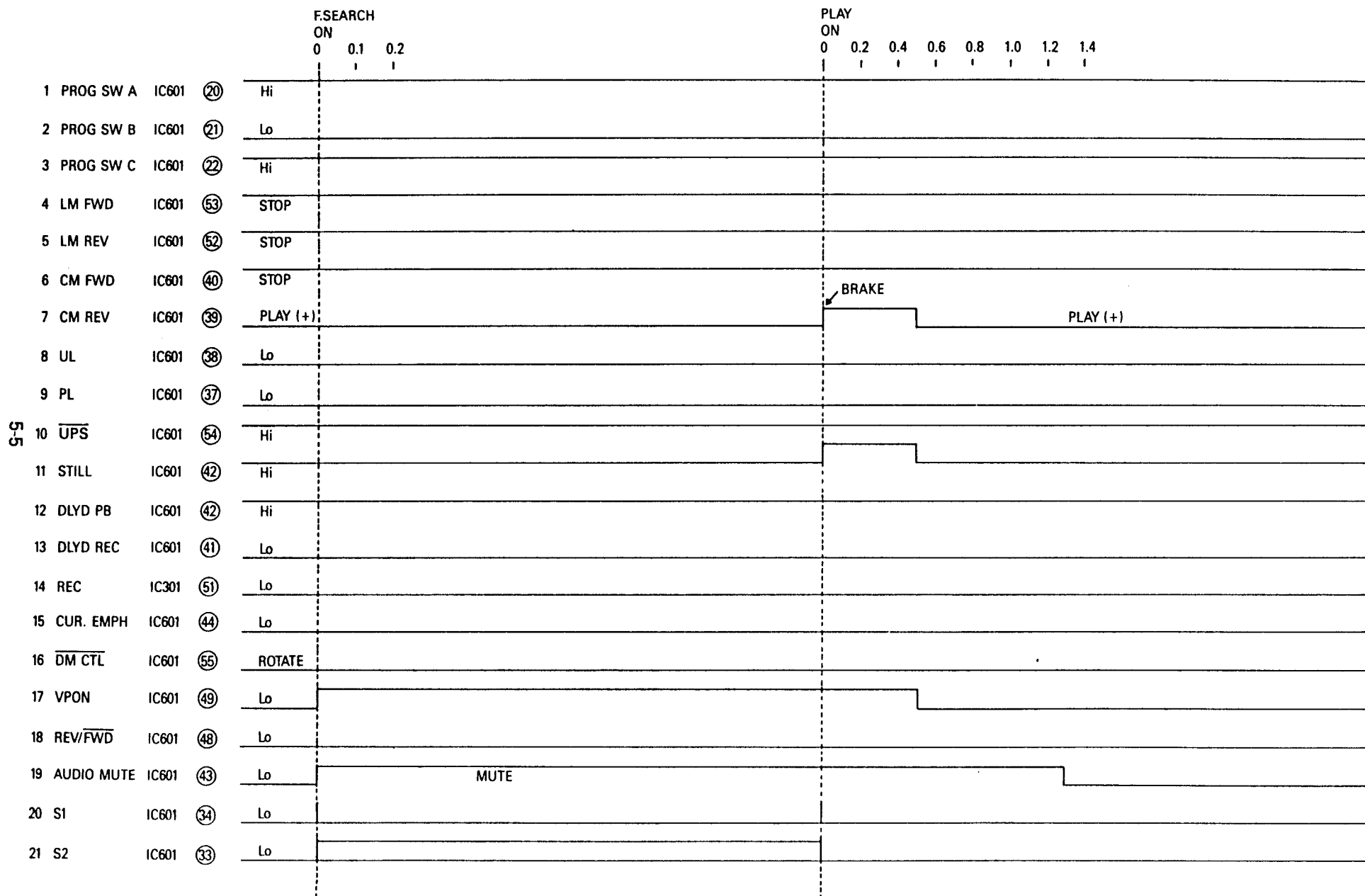
5-1-2. STOP/PLAY/STOP



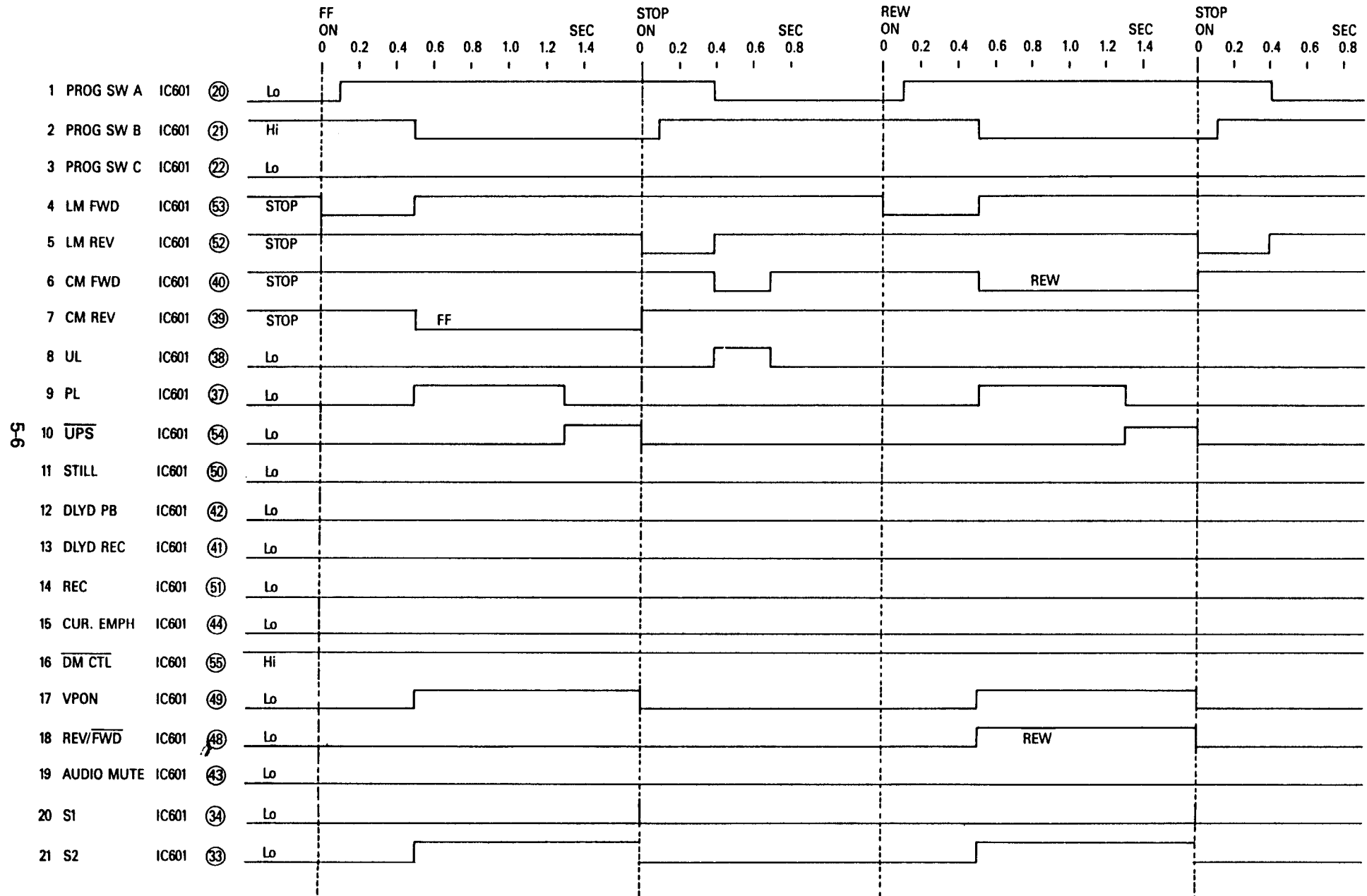
5-1-4. PLAY/R.SEARCH/PLAY



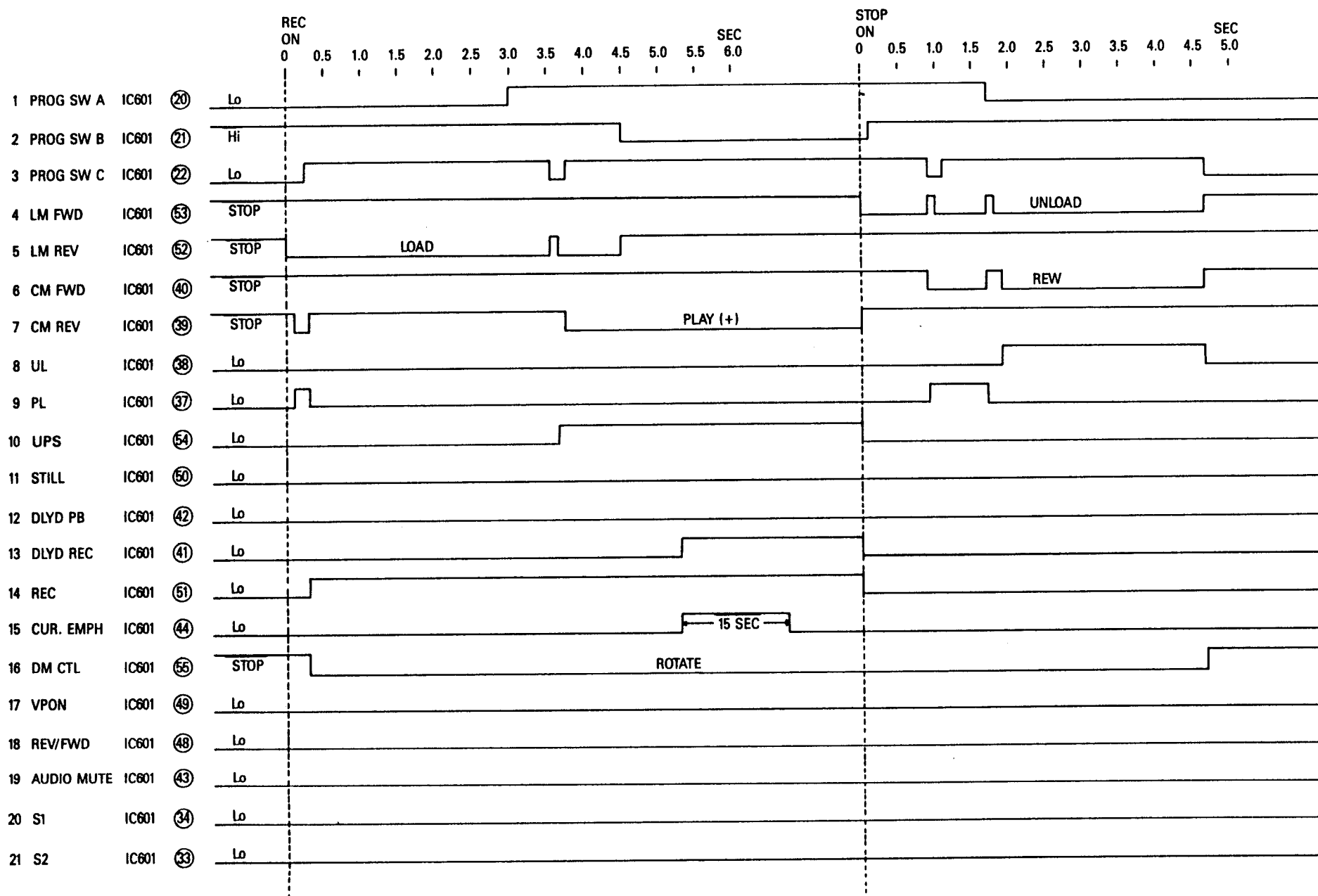
5-1-5. PLAY/F. SEARCH/PLAY



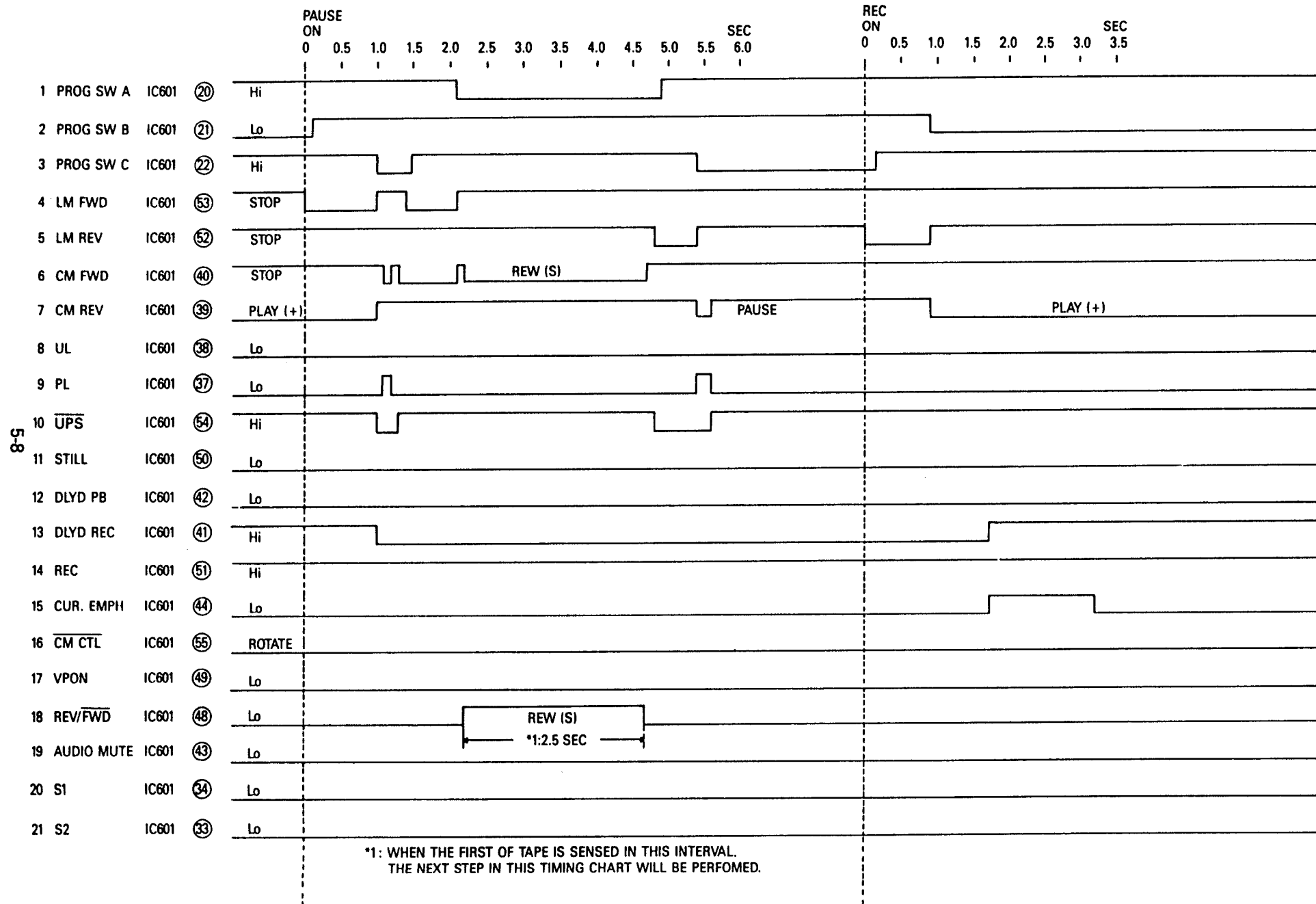
5-1-6. STOP/FF. OR REW/STOP



5-1-7. STOP/REC/STOP

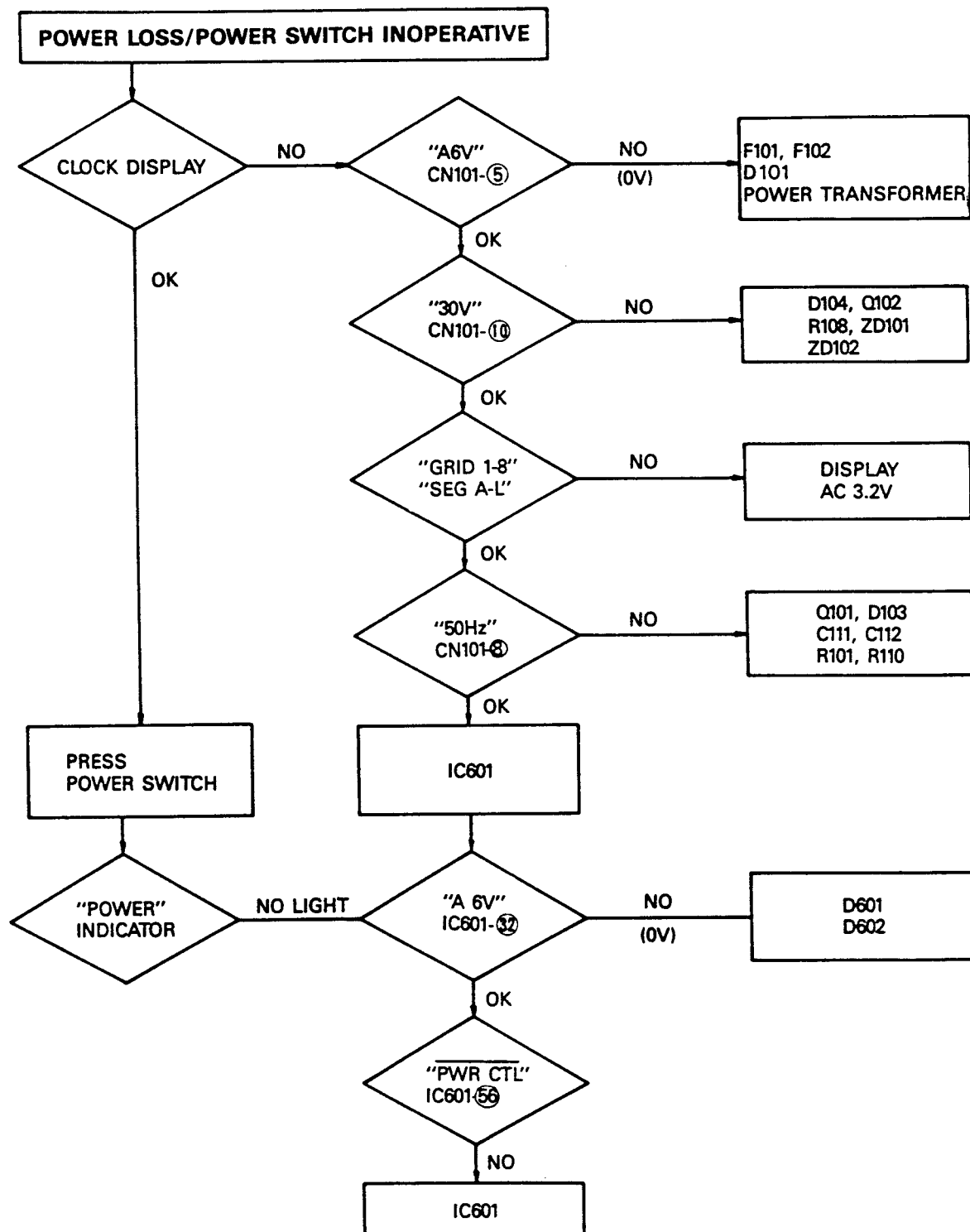


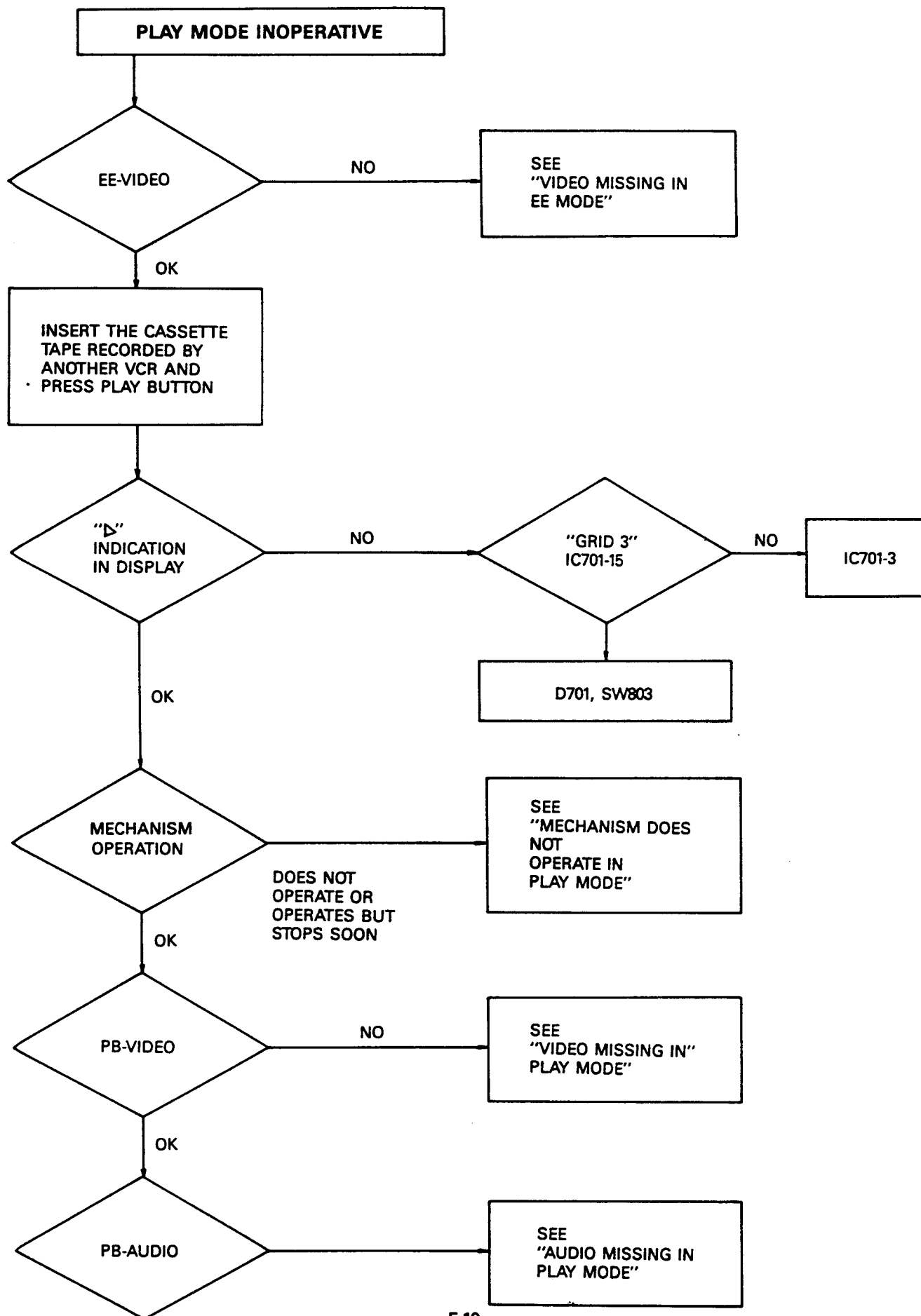
5-1-8. REC/PAUSE/REC



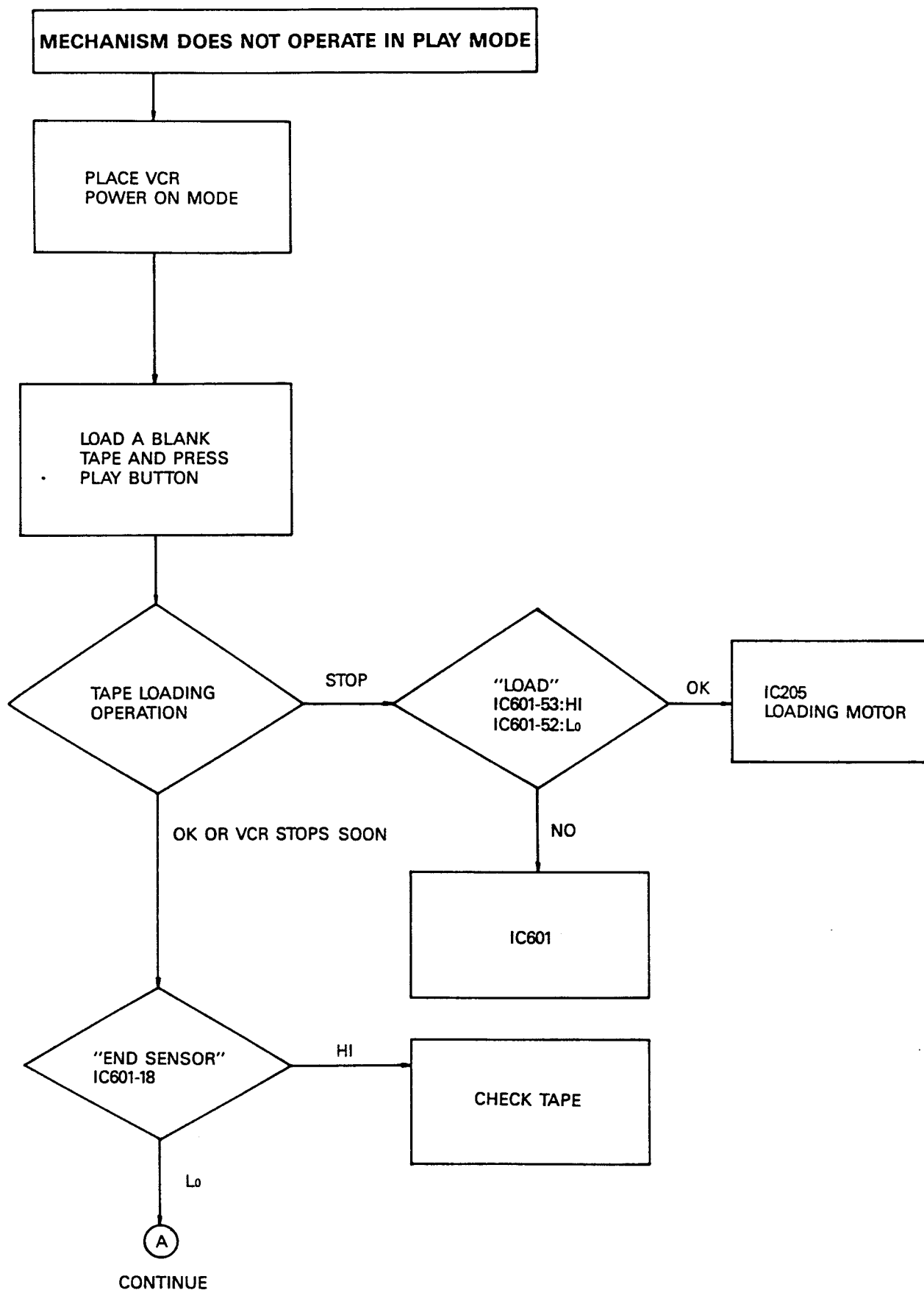
5-2. Troubleshooting Guides

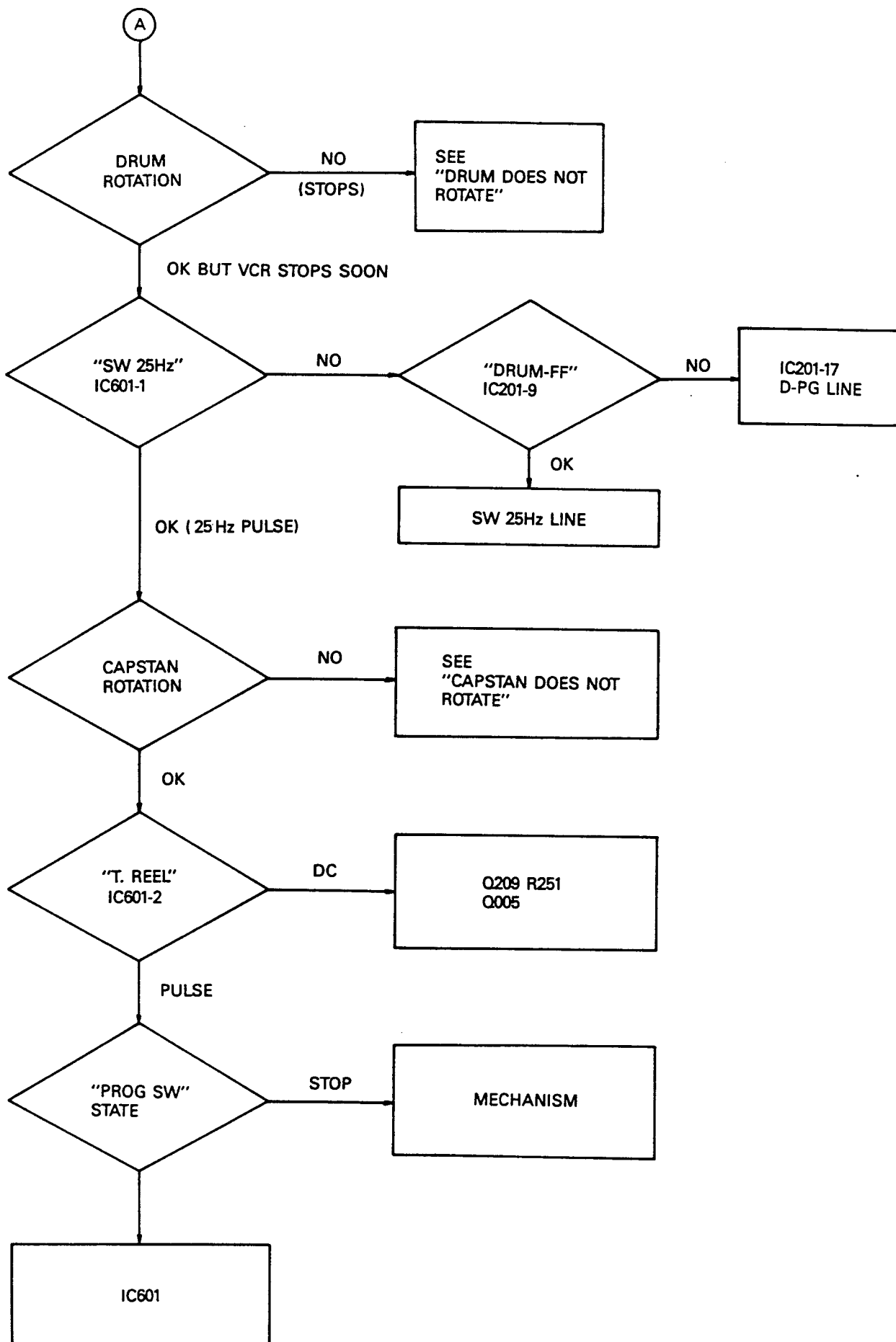
5-2-1.

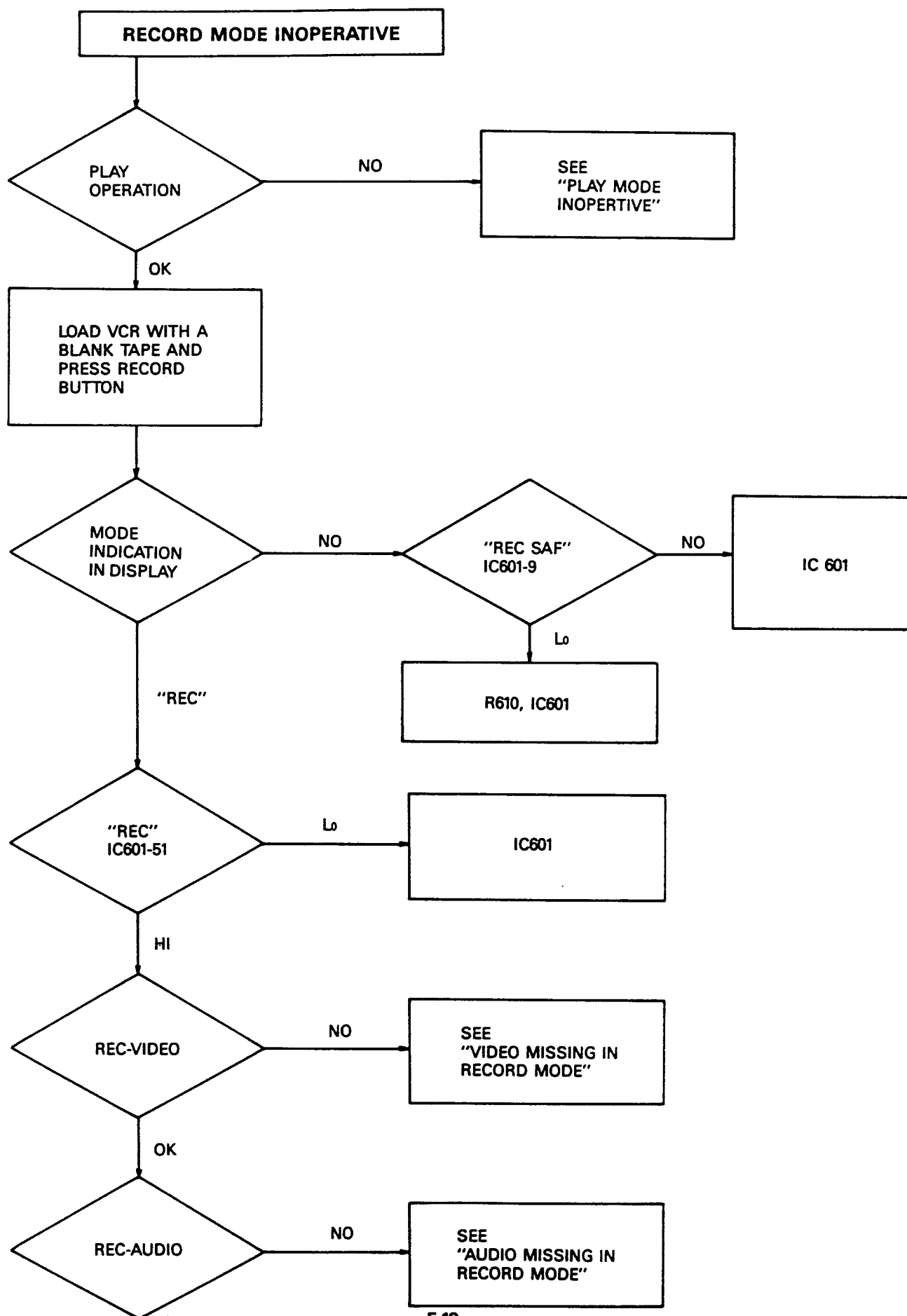




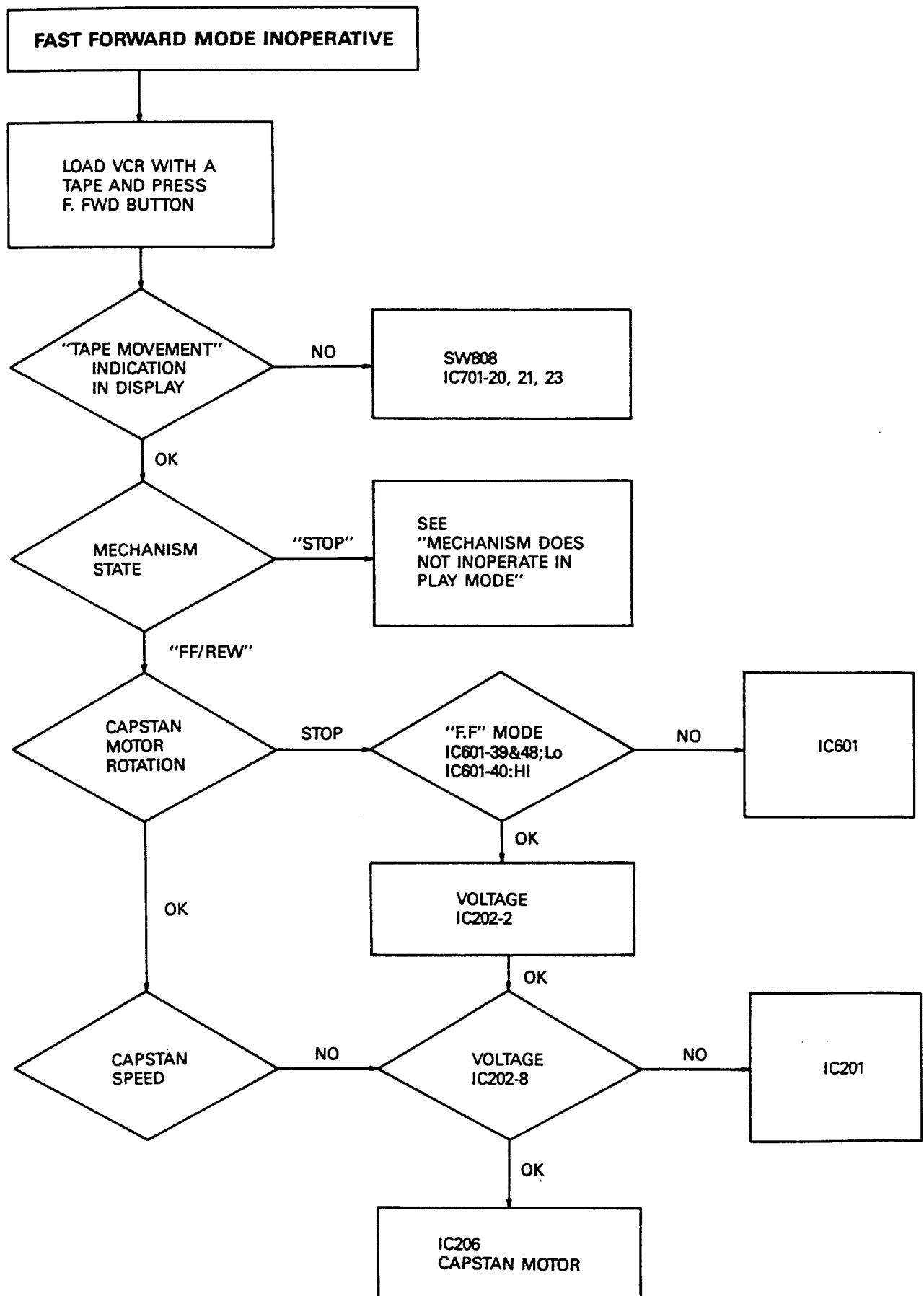
5-2-3.

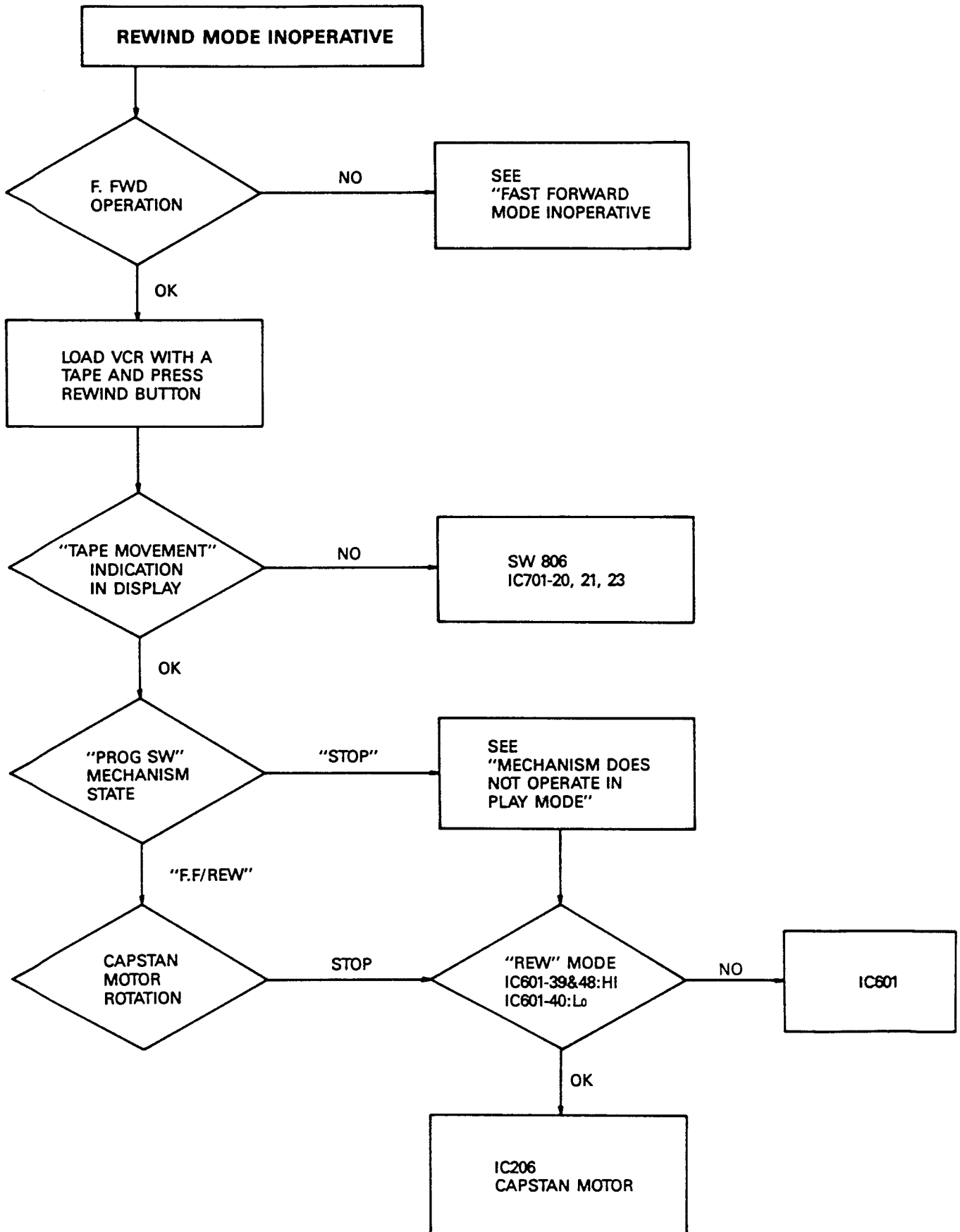


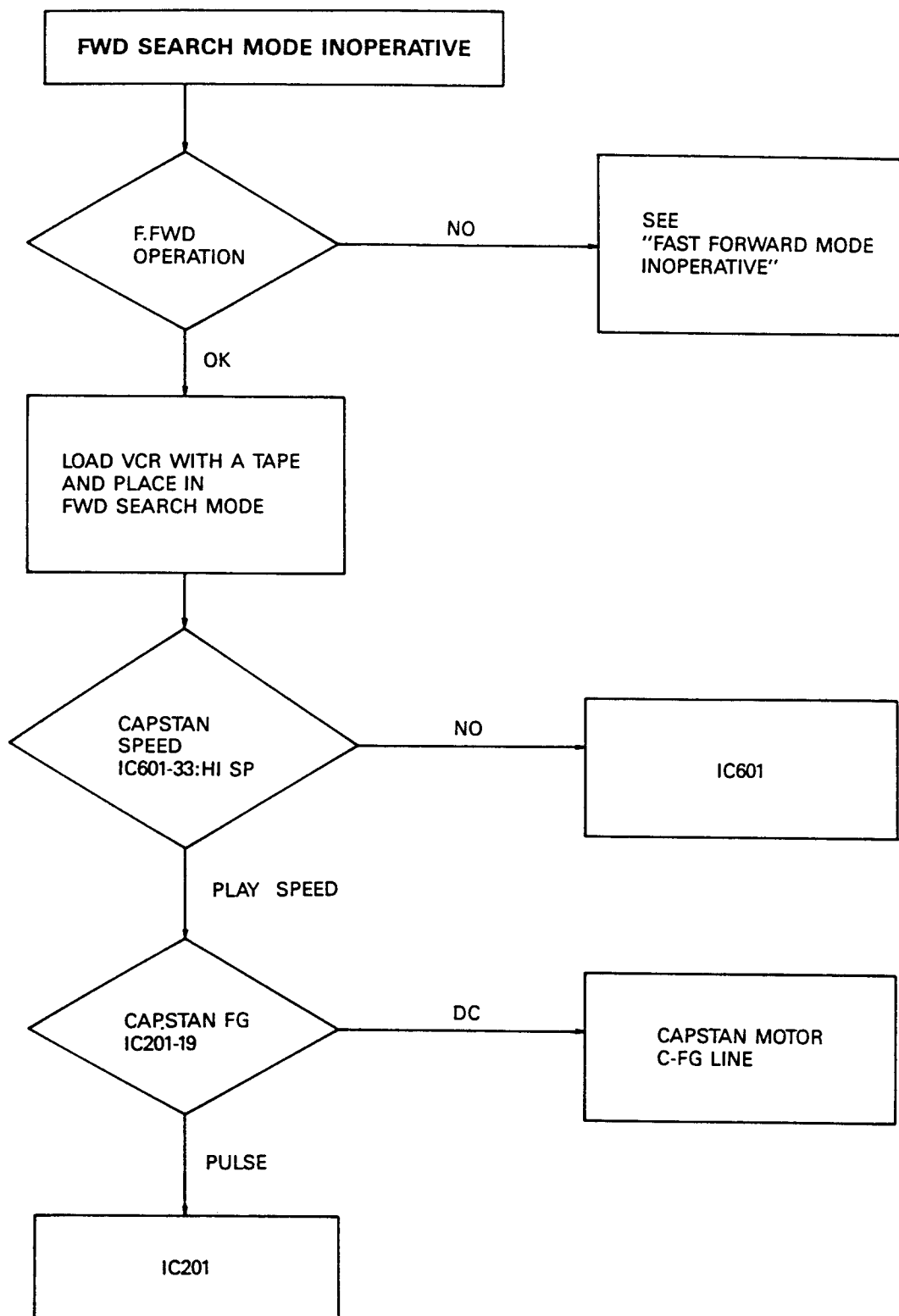


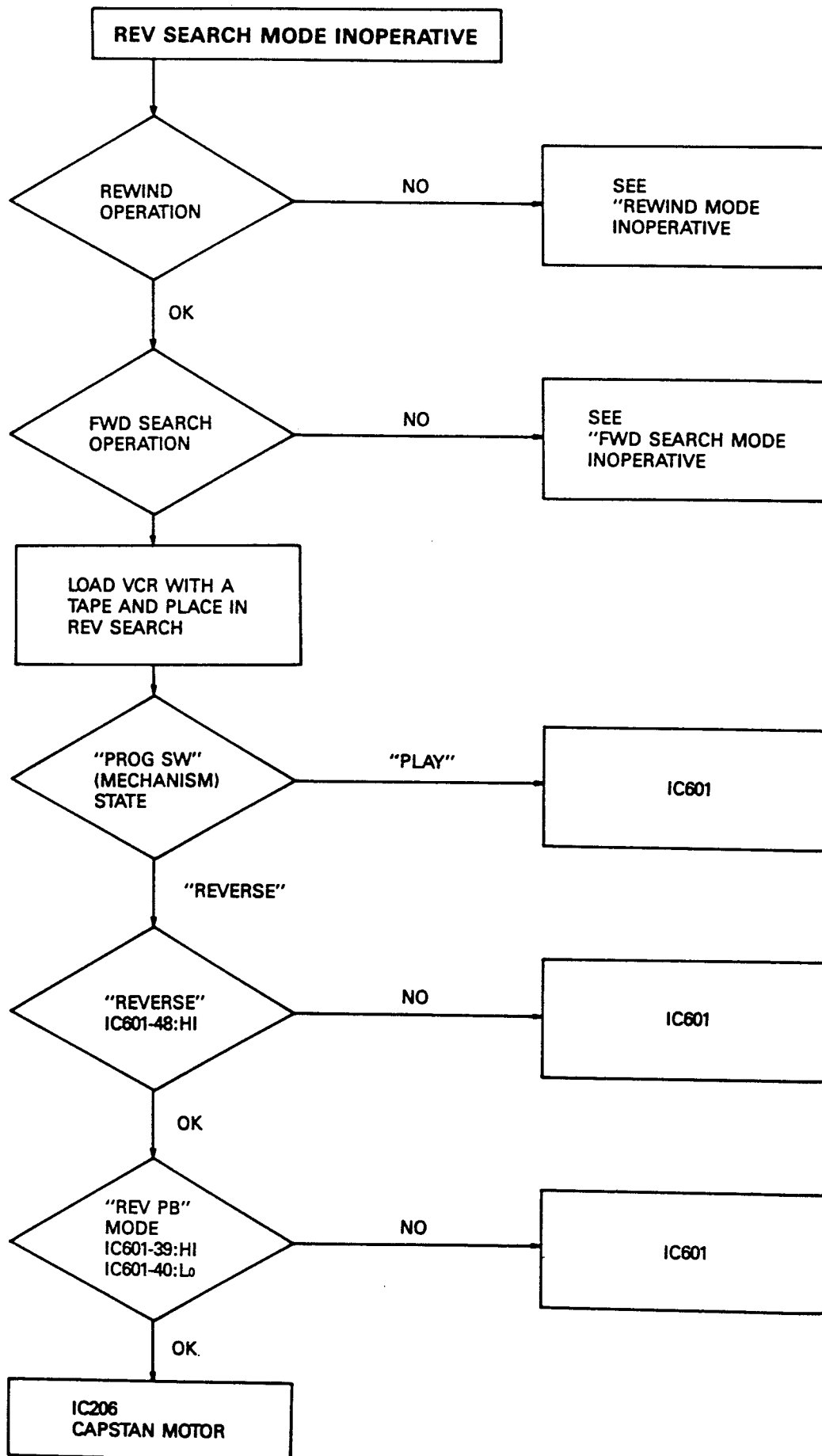


5-2-5.

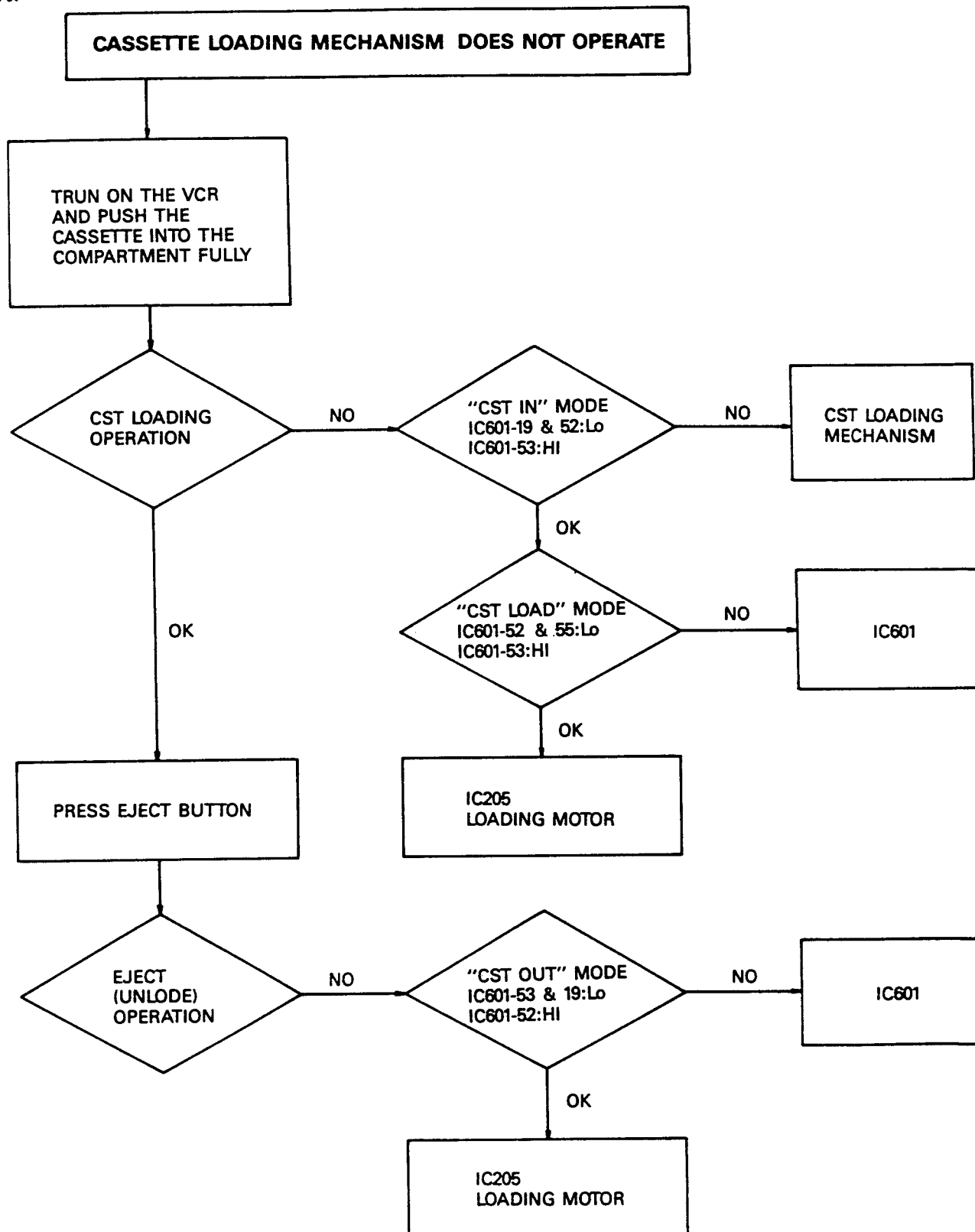




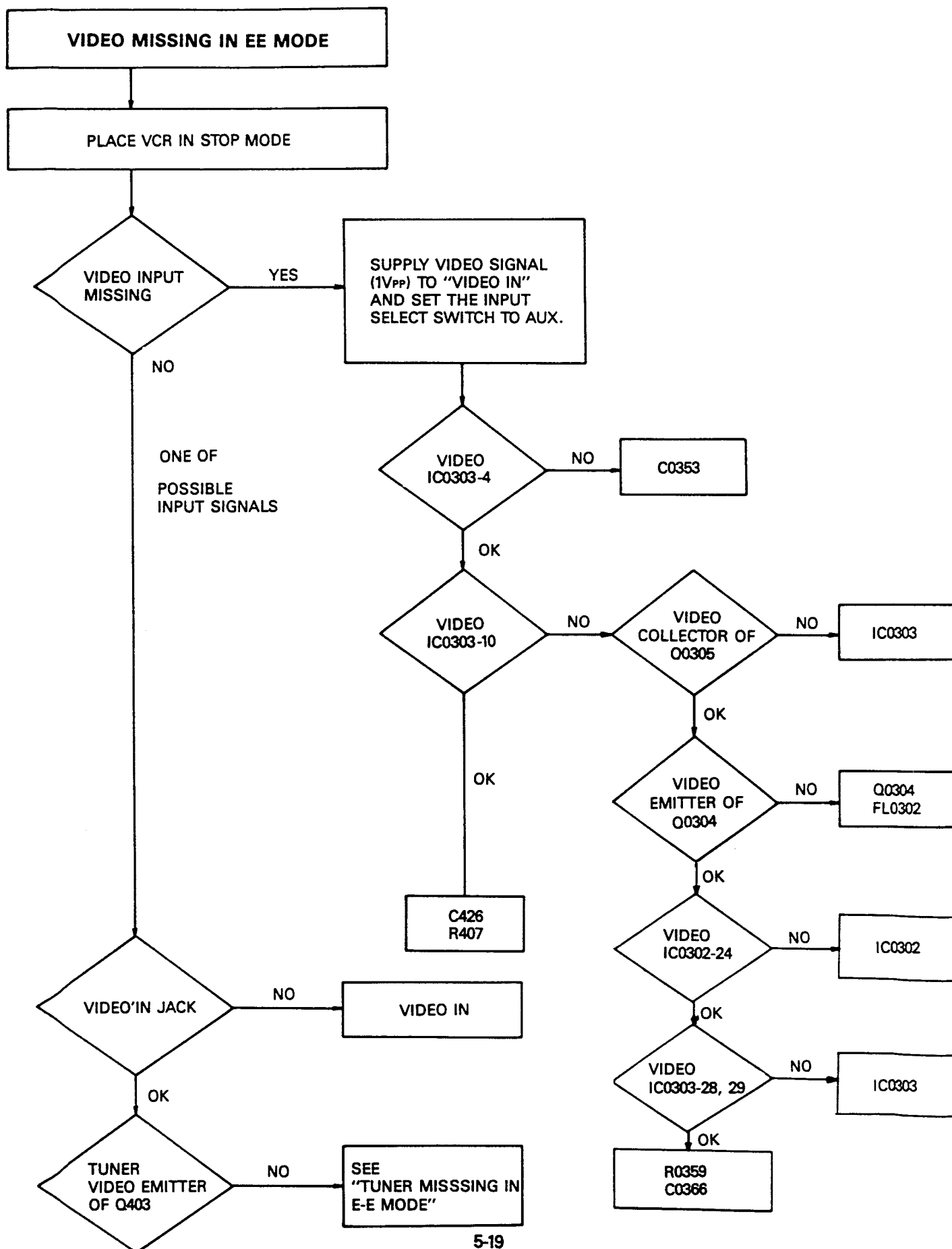


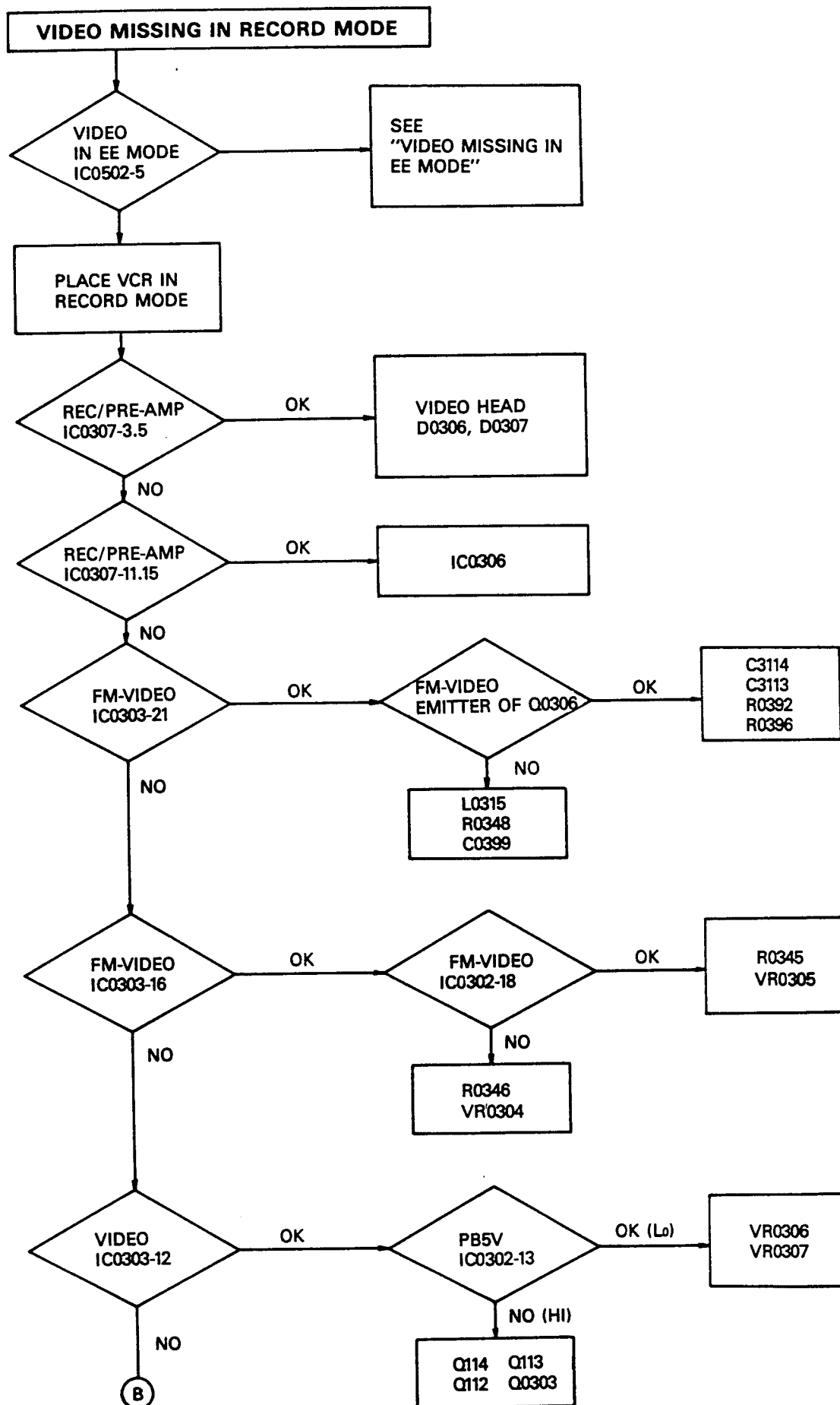


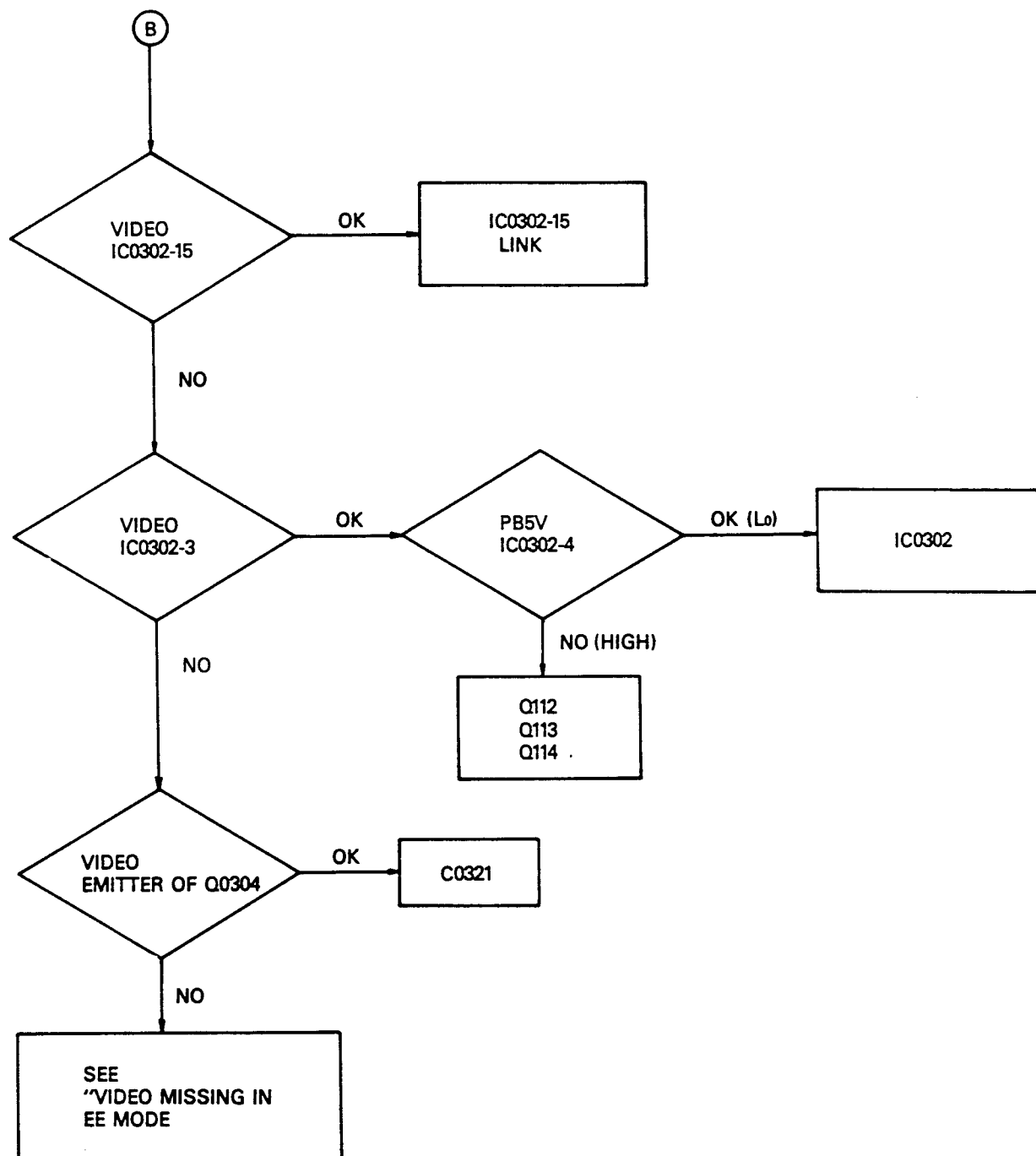
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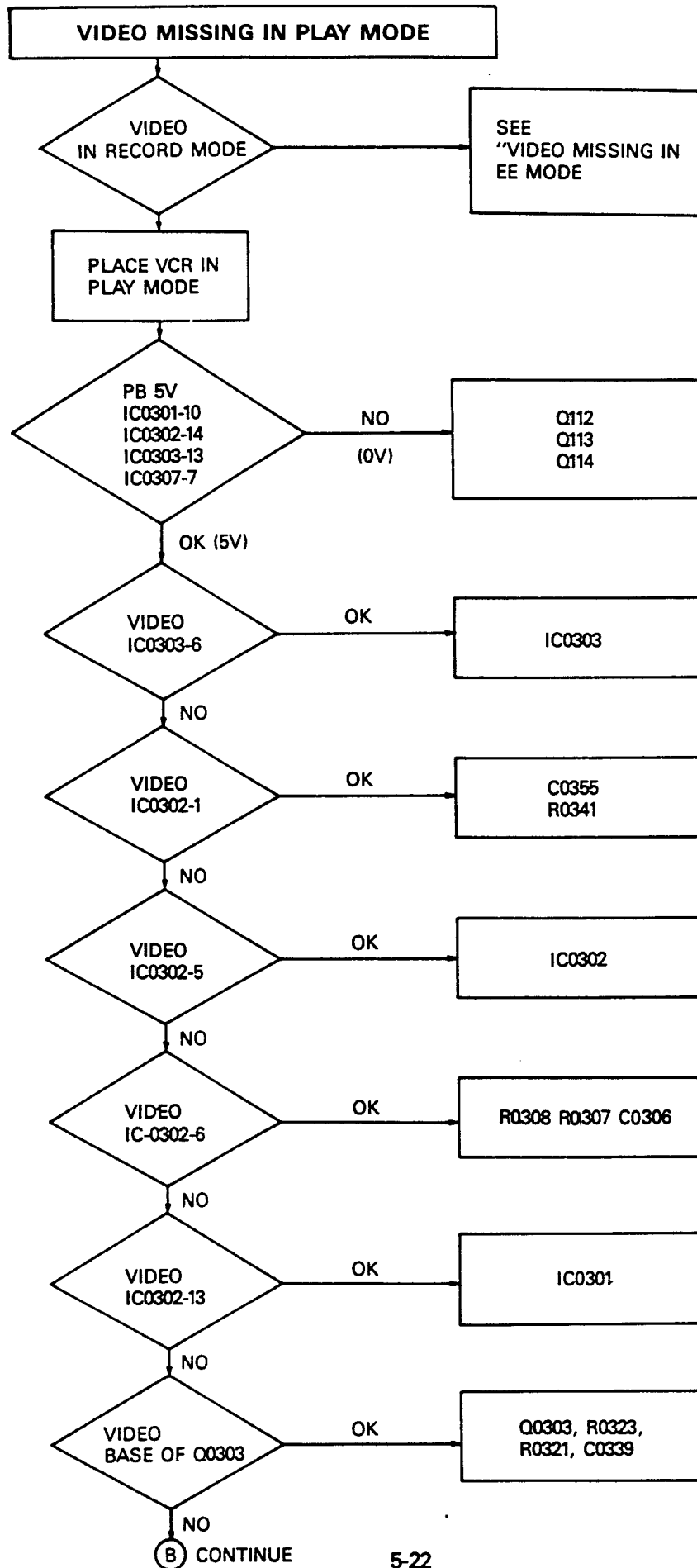


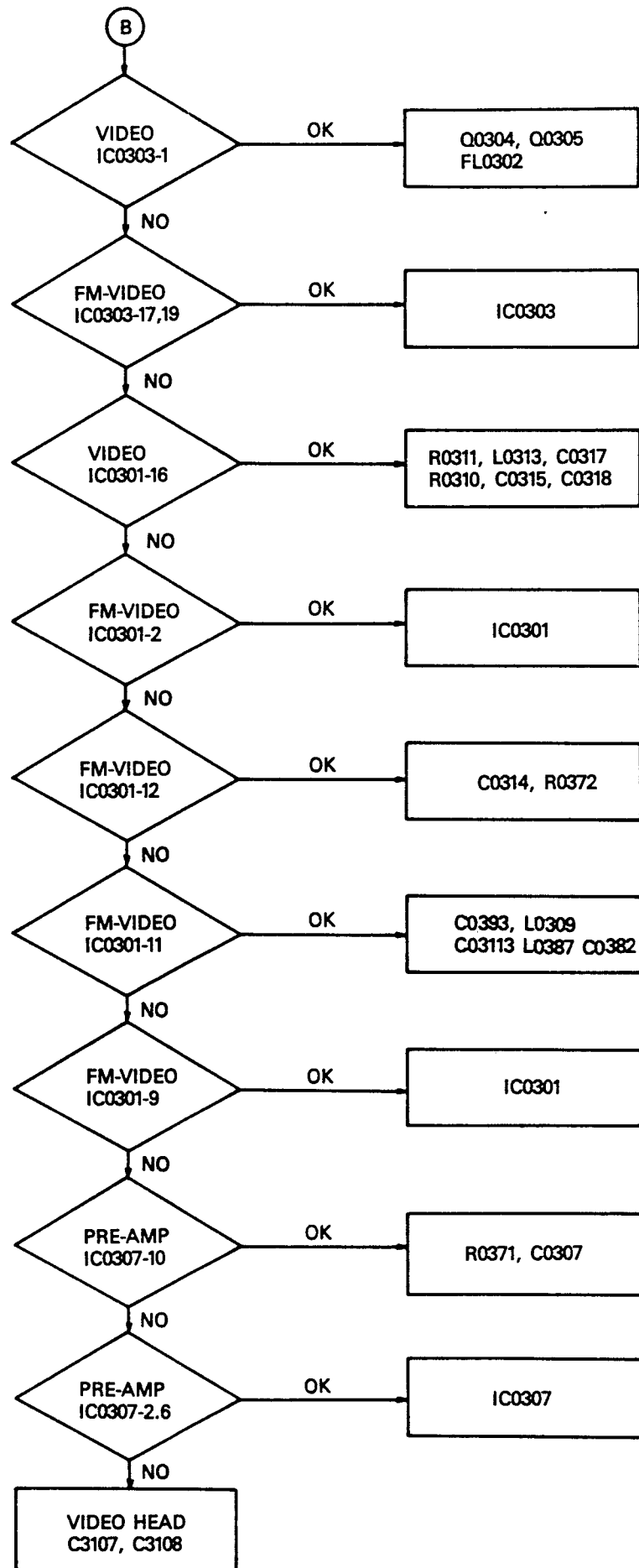
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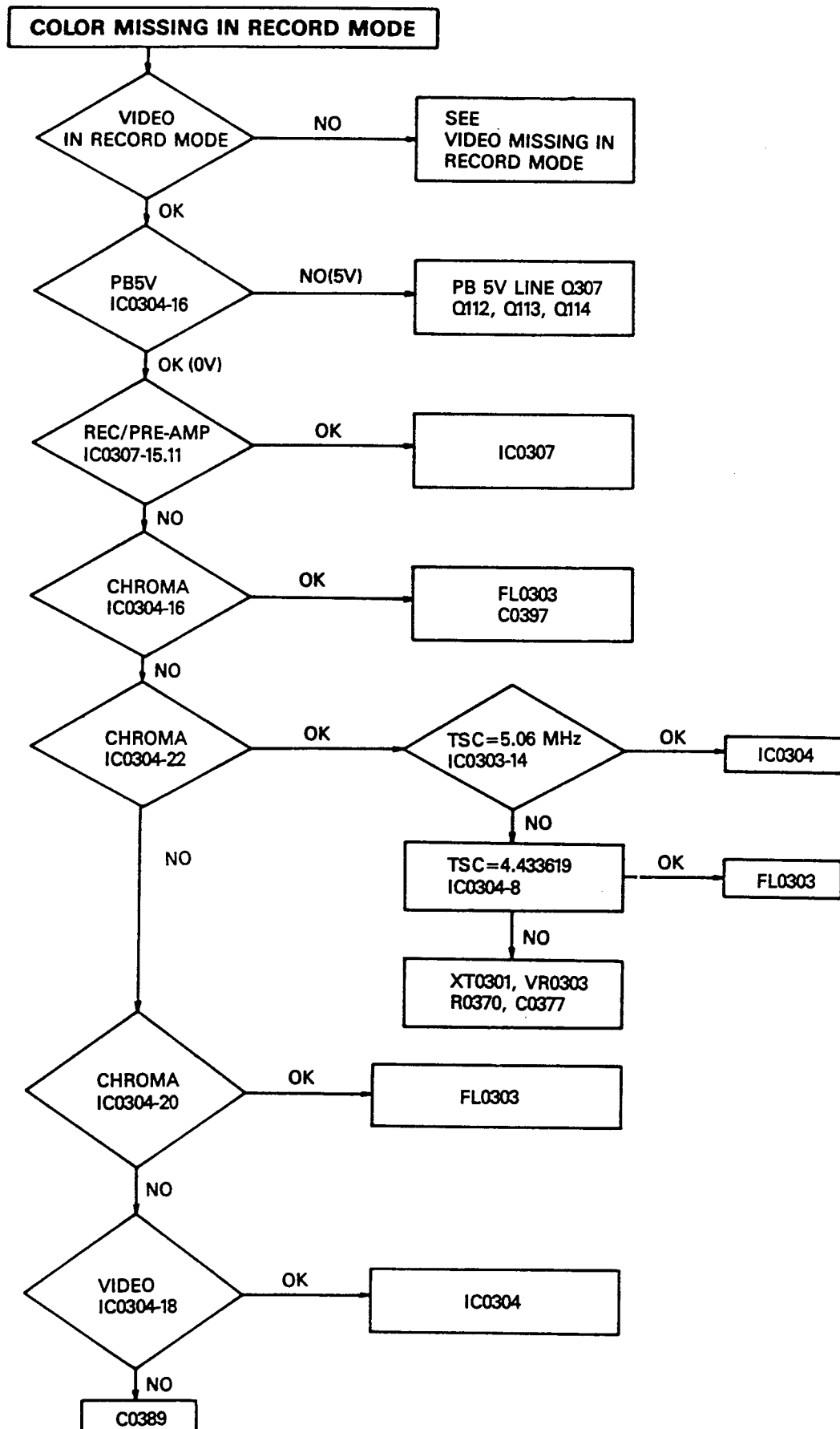


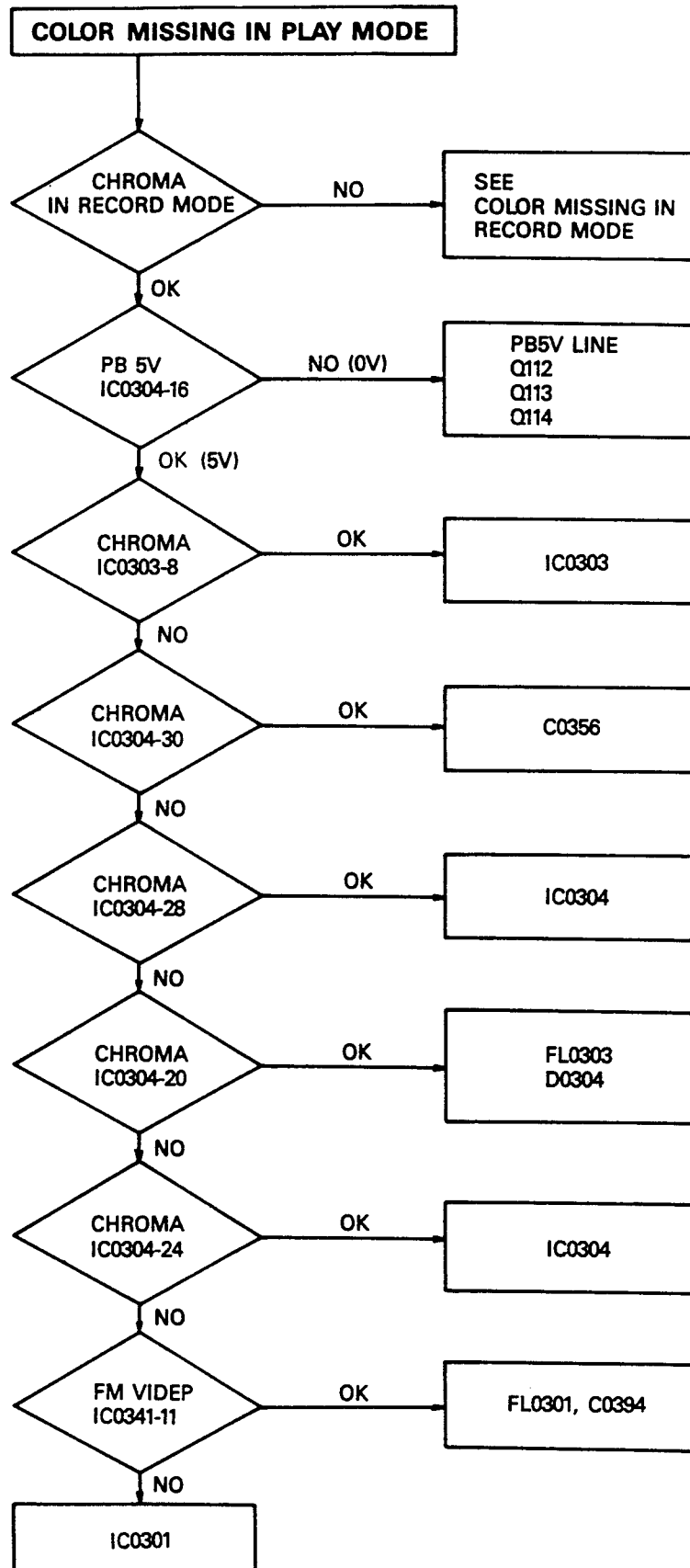


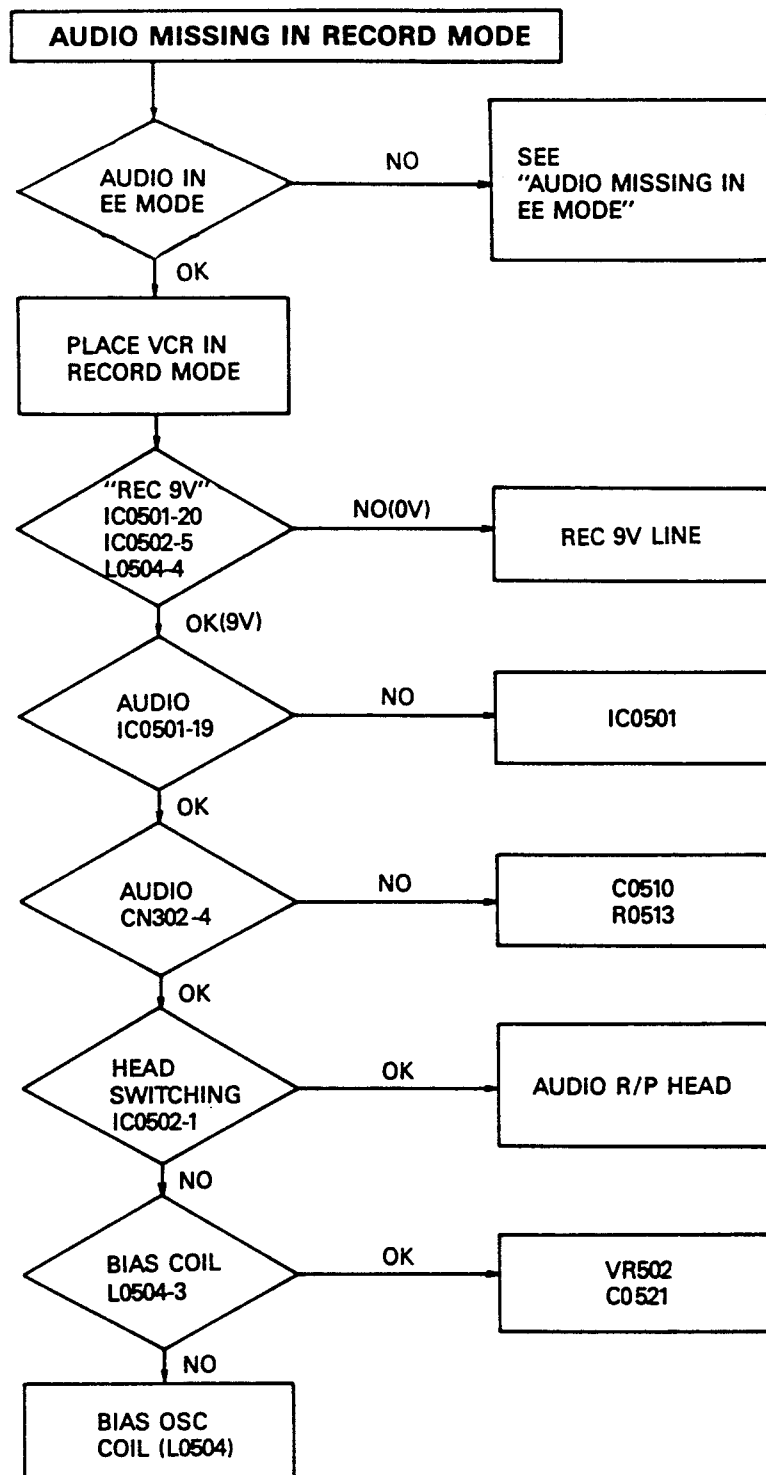


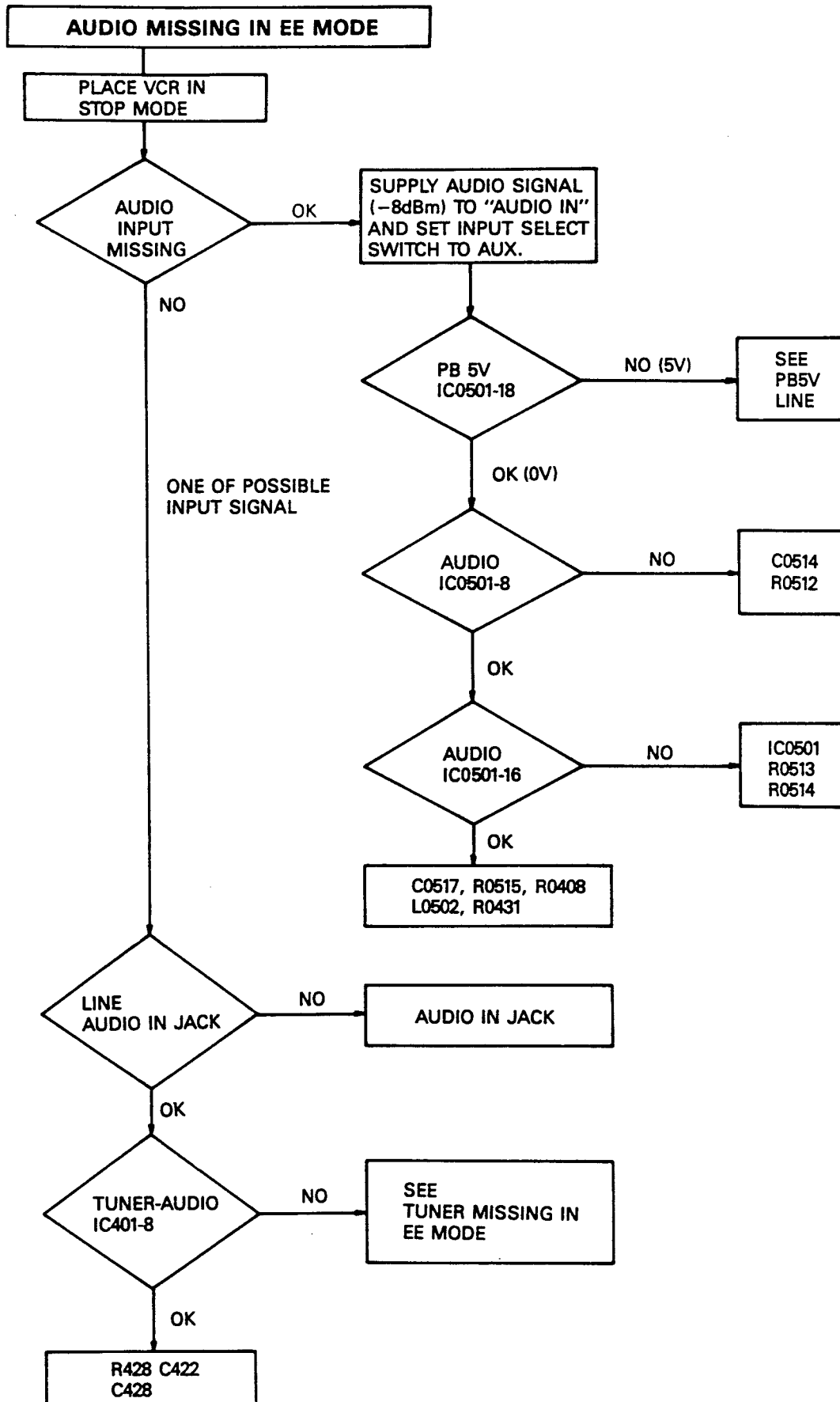


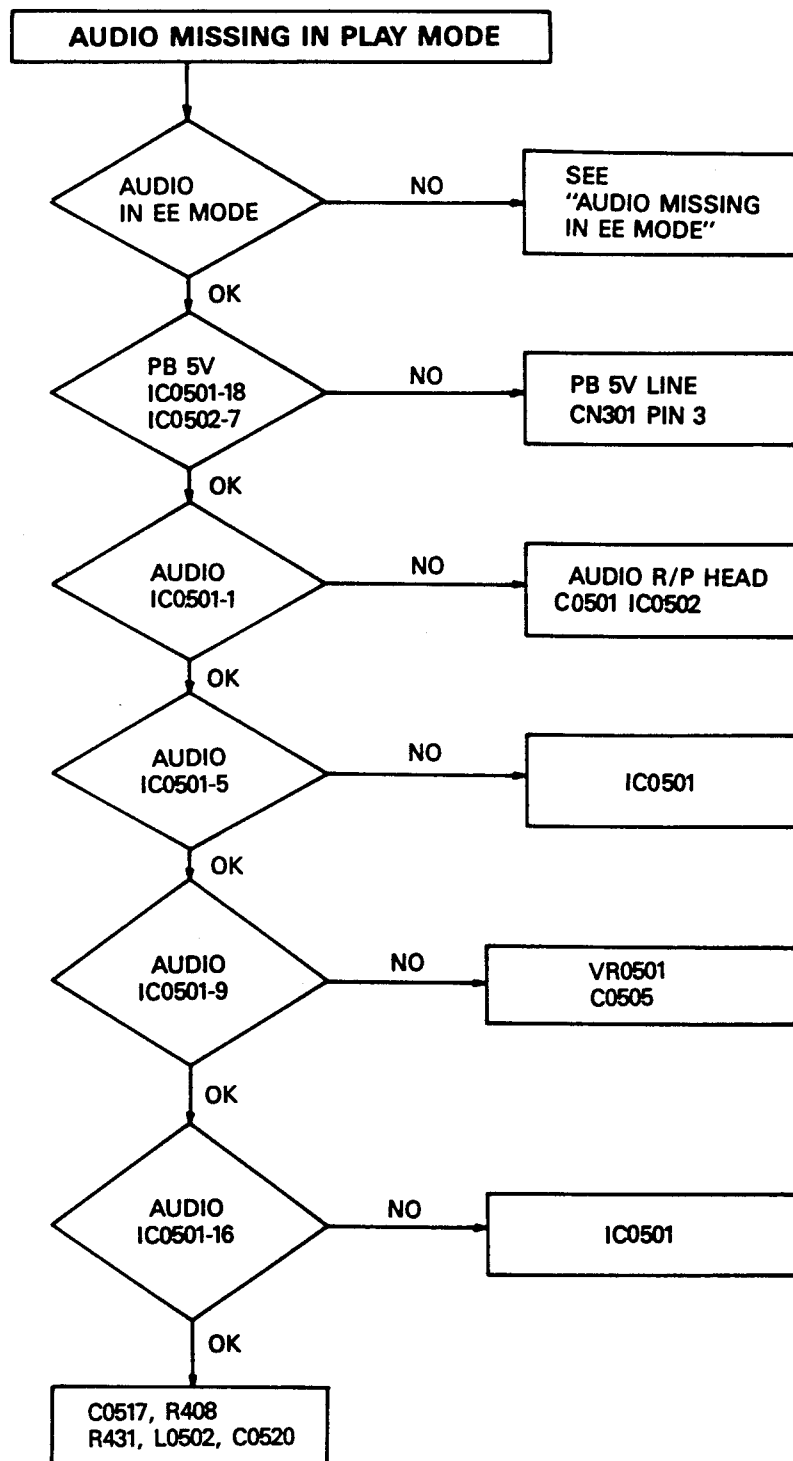




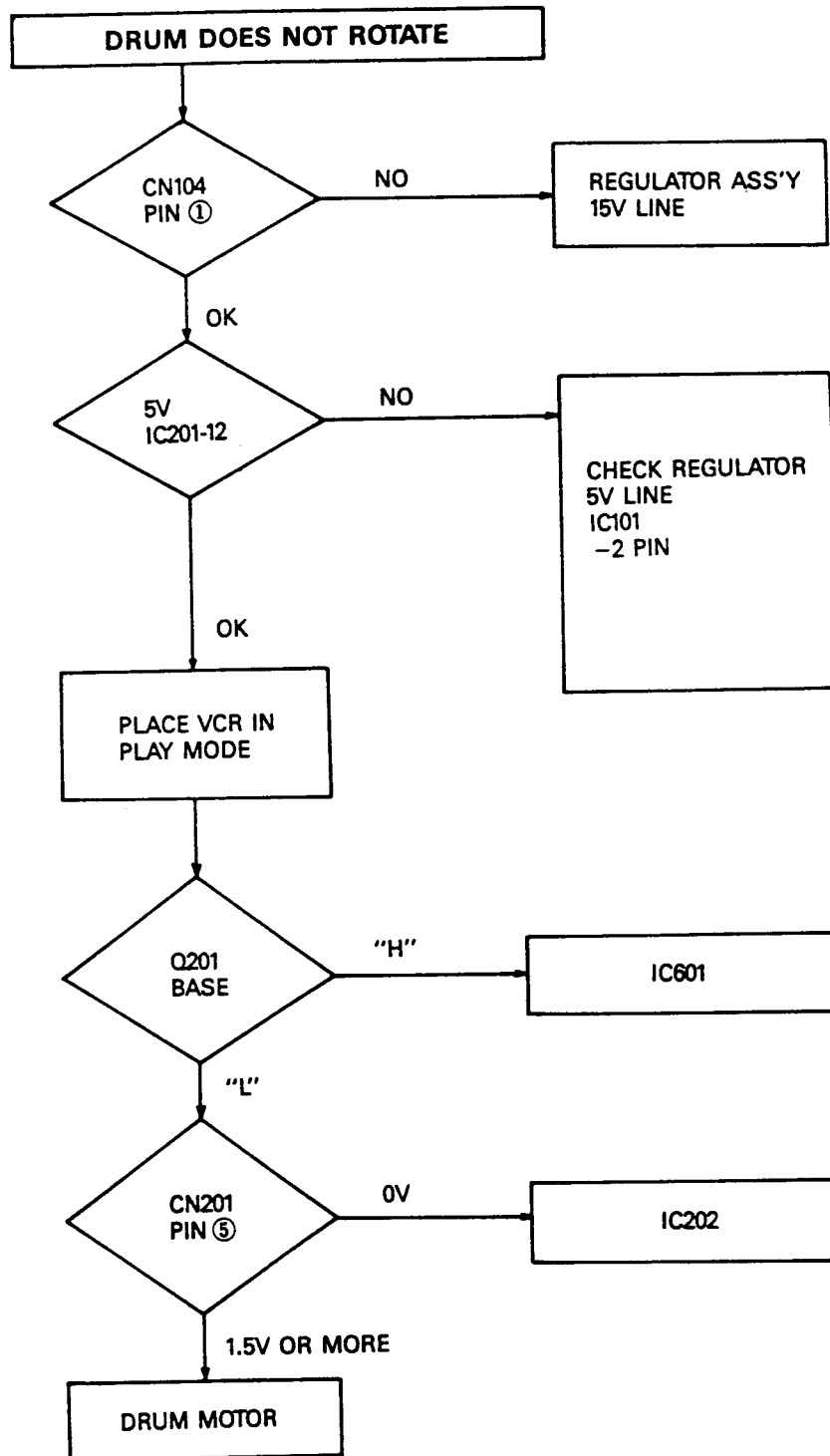


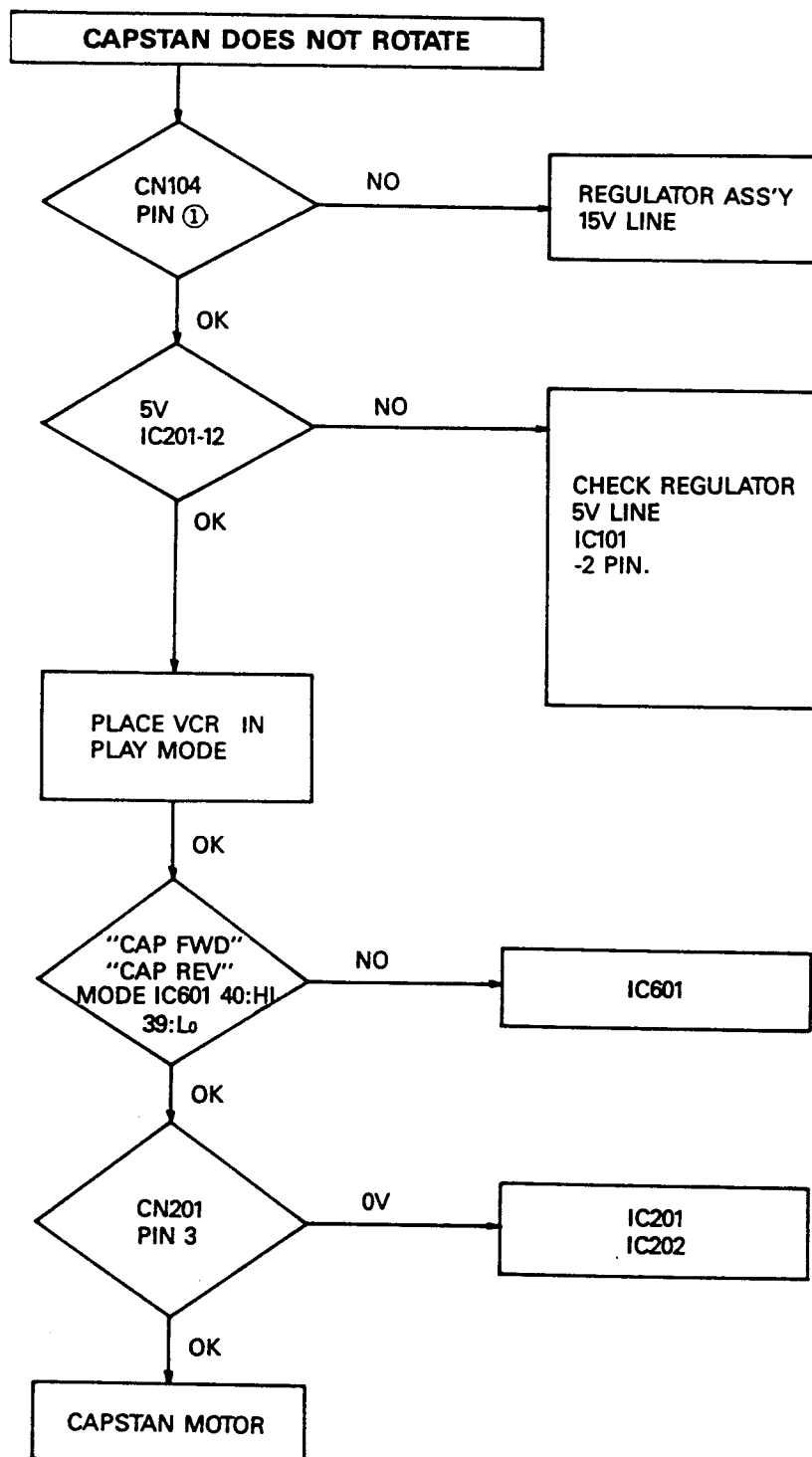


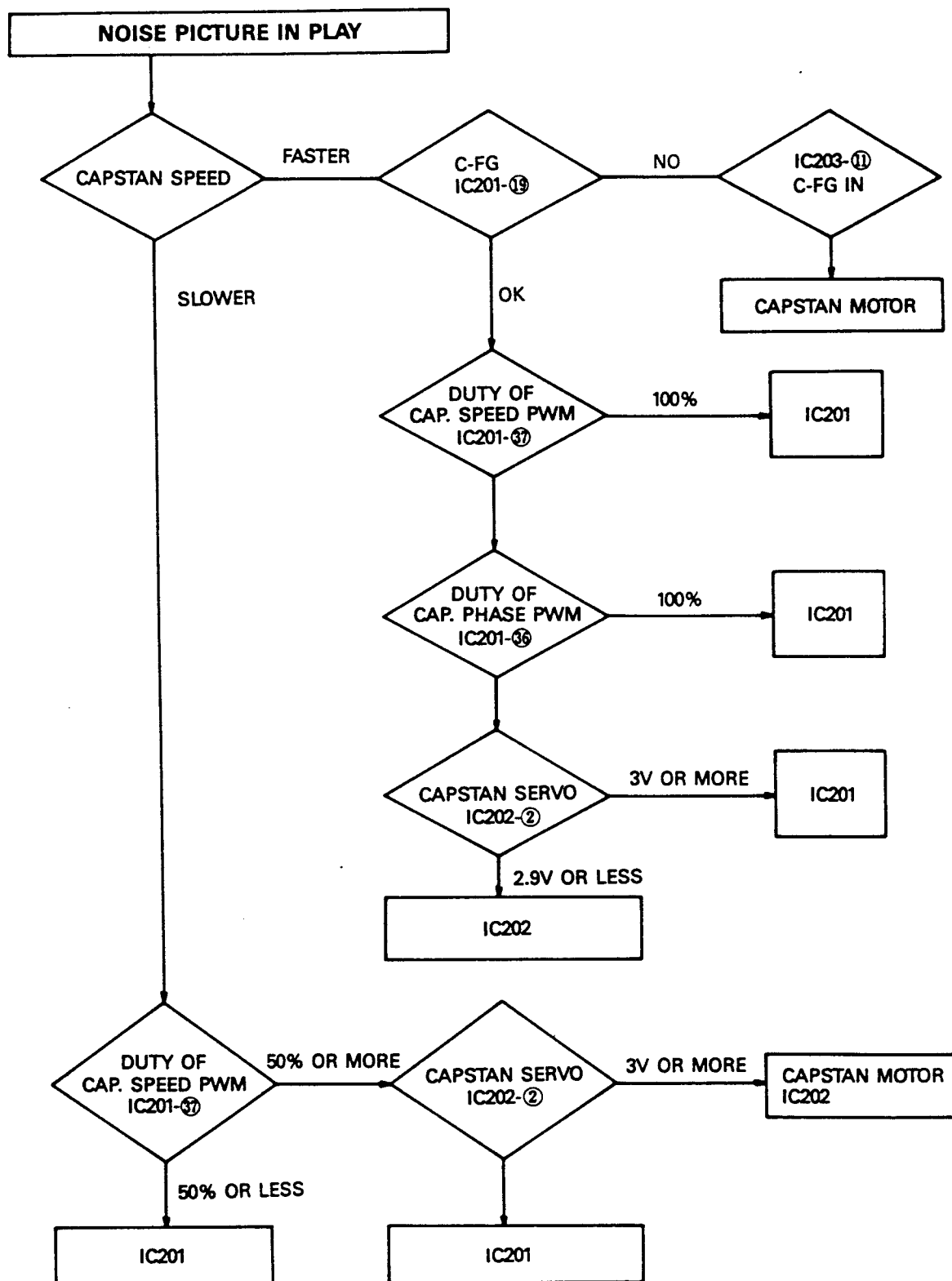


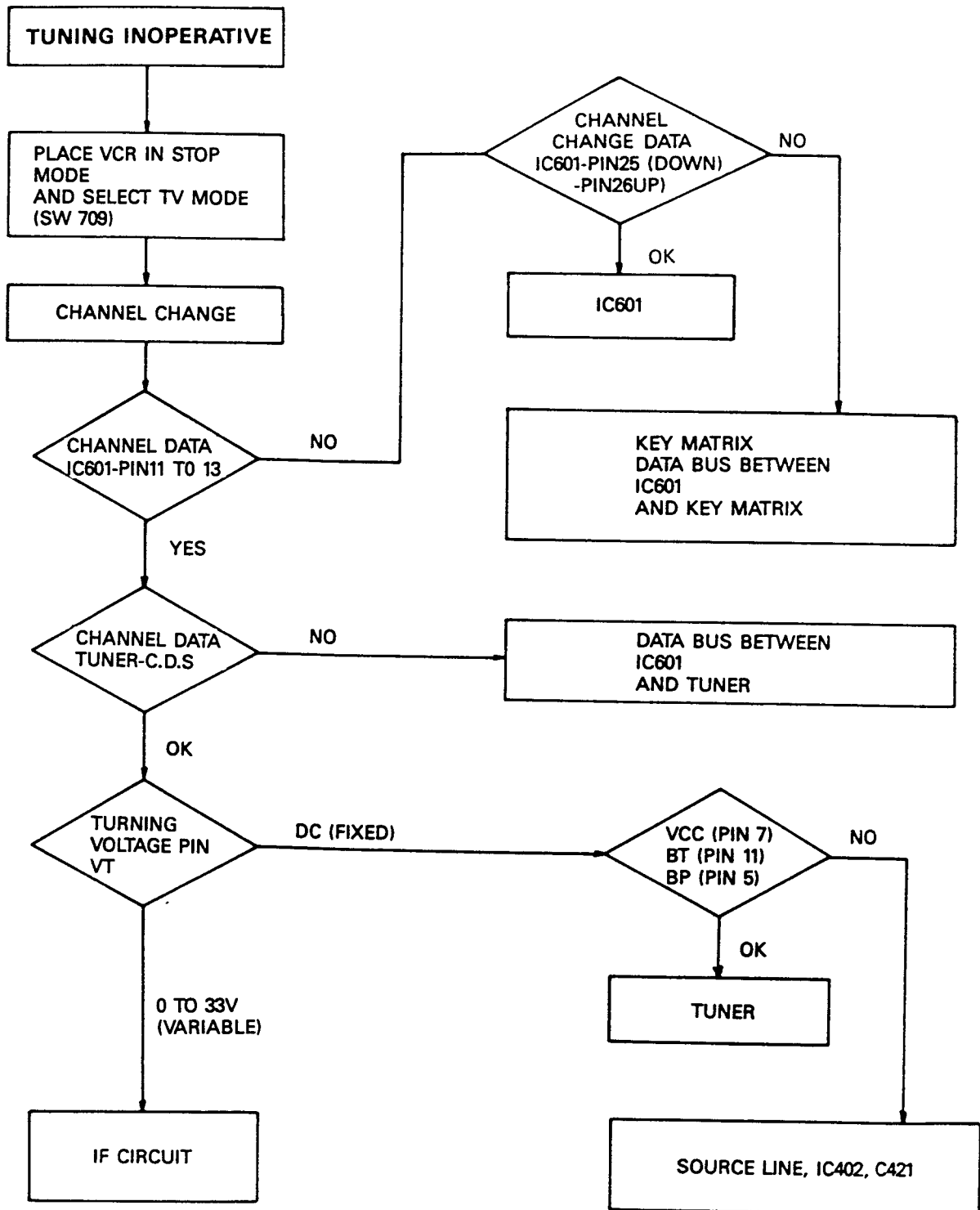


5-2-18.









6. REPLACEMENT PARTS LIST

6-1. MECHANICAL REPLACEMENT PARTS LIST

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
Instrument Assembly					239	65224-703-220	ROLLER SUPPLY	POM	
1	69000-173-020	ASS'Y PANEL FRONT	VX-720		240	65224-703-510	INNER-SUPPLY	C3604BD	
50	67642-623-220	DOOR FRONT	VX-720		241	67208-213-001	NUT-HEX	2-H3x0.5 FE FZY	
122	69098-600-710	REGULATOR	PAL (G-7), 220V WIDE		242	66114-600-310	BRKT-JOINT PCB	SPG T1.2	
123	66614-615-100	BRKT-HEAT SINK	AL T2.0		244	66674-613-110	SPRING IB SLIDE	SUS 304-WPB	
130	68020-600-820	FRAME	ABS 94VO BLK (G-7W)		246	65264-601-111	PINCH ROLLER ASS'Y	TCR-65	
131	66612-600-610	BOTTOM COVER	SPG T0.5 (G-7W)		247	65253-609-120	PINCH ROLLER ARM ASS'Y	SECC+SUM	
134	66462-602-110	CONNECTOR BOARD	ABS 94VO		248	66674-611-710	SPRING PINCH ROLLER	SUS304-WPB	
135	63344-010-050	HOLDER JACK	G-7W		249	65254-608-520	BRAKE MAIN (R) ASS'Y	DURANEX+SUS 420J2	
136	69752-603-201	ASS'Y MAIN A	PAL (G-7W) A		250	65254-608-620	BRAKE MAIN (L) ASS'Y	DURANEX+SUS 402J2	
137	69702-603-201	ASS'Y MAIN B	PAL (G-7W) A		251	66674-611-910	SPRING MAIN BRAKE	SUS 304-WPR	
141	63104-600-220	GROUND-SPRING	SUS304 (G-7W) T0.3		252	65254-608-720	BRAKE SUB (R) ASS'Y	DURANEX+SUS 420J2	
142	66634-601-210	CLAMPER WIRE	SPTT T0.3		254	65254-608-810	BRAKE SUB (L) ASS'Y	DURANEX+SUS 402J2	
143	66614-714-310	BRKT GUIDE TAPS	SPG T1.0		255	66674-612-110	SPRING SUB BRAKE (L)	SUS304-WPB	
144	66614-714-310	BRKT-PRE AMP	SPG T0.8 (PAL G-7W)		264	66604-623-310	HEAD SINK-A	A20179	
146	64543-603-410	SHILD CASE TOP	SPTT T0.25 (PAL G-7W)		265	66604-623-420	HEAD SINK-B	A20179 FLAT	
147	64544-610-610	SHILD CASE BOT	SPTT T0.25 (PAL G-7W)		278	69000-270-113	ASS'Y JOINT BOARD	G7	
148	64543-603-110	SHILD CASE BODY	SPTT T0.25 (PAL G-7W)		403	66604-624-910	HOLDER TR ASS'Y	A20179 TSUS 304	
151	69780-603-203	ASS'Y FUNCTION	PAL (G-7) VX-720		404	69000-370-013	ASS'Y DRUM MOTOR	G7	
152	69771-603-215	ASS'Y TIMER	PAL (G-7) VX-720		420	66154-600-320	COVER UPPER DRUM	A1050PT0.5	
153	66003-605-220	HOLDER PCB	ABS 94HB		450	69017-123-310	DRUM ASS'Y	D7PRIA-HC	
160	66664-605-110	HINGE MAIN B	PAL (G7-W)		451	69000-370-028	ASS'Y BASE DRUM	G7	
163	68002-601-110	TOP CABINET	MISH T0.8 BLK (G7-W)		452	69000-370-026	ASS'Y LOWER DRUM	D7PRIA-HC	
181	67158-230-081	SCREW-TAP BH	2-3x8 FE FZY		453	69000-370-024	ASS'Y UPPER DRUM	D7PRIA-HC	
182	67154-101-440	SCREW-TAP PWH	2-3x10 FE FZY		454	69000-270-101	ASS'Y-PRE AMP	D7 PRI	
190	67158-240-121	SCREW-TAP BH	2-4x12 FE FZY		901	67004-100-810	SCREW-PH	+M2.6x4 FE FZY	
191	67094-740-121	SCREW-TAP PWH	2S-4x12 FE FZY		902-1	67004-100-710	SCREW-PH	+M3x4 FE FZY	
193	67158-240-103	SCREW-TAP BH	2-4x10 FE FZB		903	67098-130-054	SCREW-PH	M3x8 FE FZY-C	
200	69017-150-310	FULL DECK ASS'Y	D7-PRI		904	67068-820-033	SET SCREW	M2x3 FE FZB	
278	69000-270-113	ASS'Y JOINT BOARD	G7		906	67098-130-081	SCREW-PH	+M3x6 FE FZY	
454	69000-270-101	ASS'Y PRE-AMP	D7 PRI		907-1	67009-130-051	SCREW-PH	+M3x5 FE FZY	
501	66122-700-490	HOUSING ASS'Y	FIL SYSTEM (G7)		907	67004-100-710	SCREW-PH	+M3x4 FE FZY	
Transport Mechanism Assembly					909	66674-608-130	GROUND PLATE TOP	SUS430 T0.25	
201	66120-600-050	MECHA CHASSIS ASS'Y	SECC+SUM	S.N.A	911	67008-130-051	SCREW-PH	+M3x5 FE FZY WL	
206	65234-600-411	REEL DISK (T) ASS'Y	POM+SUS		912	67008-123-181	SCREW-PH	+M2.3x18 FE FZY	
207	65234-600-511	REEL DISK (S) ASS'Y	POM+SUS		913	67008-126-081	SCREW-PH	+M2.6x8 FE FZY	
208	66604-609-110	HOLDER TENSION SP	SECCE 20/20		914	67108-330-081	SCREW-PH	M3x6TAP TITE	
209	66674-611-310	SPRING ARM TENSION	SUS304-WPB		917	67094-700-820	SCREW-BH	+M3x7.5 BSW3 WPNI	
210	65254-608-410	ARM TENSION ASS'Y	SECC+SUS 304		918	67094-700-710	SCREW-PWH	+M3x6 FE FZY	
211	65274-600-610	TENSION BAND ASS'Y	FELT+PBSP		923	67094-700-750	SCREW-PWH	M3x12 FE FZY	
212	69000-270-040	ASS'Y POLE BASE L	G7		924	67094-700-720	SCREW-PWH	M3x8 FE FZY	
213	66653-600-011	BASE POLE (L) ASS'Y	ZDC12+SUS		951	67304-600-010	WASHER-PLAIN	SPG	
214	65223-700-330	GUIDE ROLLER ASS'Y	SUS303+POM		953	67304-103-430	WASHER-PLAIN	3.2x6x0.13 POLY SLIDE	
215	69000-270-039	ASS'Y POLE BASE R	G7		956	67304-103-410	WASHER-PLAIN	3.2x6x0.5 POLY SLIDE	
216	66653-600-611	BASE POLE (R) ASS'Y	ZDC12+SUS		957	67334-600-310	SLIT WASHER	P12.5xP15.2xT0.5	
218	67224-602-010	NUT-NYLON	M3x0.5 FE FZY		958	67334-600-410	SLIT WASHER	P13.2xP16xT0.5	
219	66674-611-810	SPRING REVIEW ARM	SUS304-WPB		971	67358-103-006	RING-E	PIS STSC304-CSP	
220	69000-270-042	ASS'Y HOLDER LED	G7		Bottom Side Mechanism				
224	67224-600-010	NUT-ADJUST	C3604BD		201	66120-600-050	MECHA CHASSIS ASS'Y	SECC+SUM	S.N.A
225	66674-611-510	SPRING TORTION A/C	SUS 304 WPB		202	66114-600-010	BRKT A	SECCE 20/20	
228	69000-270-059	ASS'Y A/C HEAD	G7		203	66114-600-110	BRKT B	SECCE 20/20	
230	66614-611-510	HOLDER A/C HEAD	SECC		204	66114-611-210	BRACKET D	SPG T1.6	
231	66674-710-910	SPRING A/C HEAD	SUC WPA		256	69000-270-022	ASS'Y GEAR LOADING L	G7	
232	67094-701-410	SCREW-A/C HEAD	SUM 32 P15		260	69000-270-023	ASS'Y GEAR LOADING R	G7	
233	69000-270-061	ASS'Y-F/E HEAD	D7-NR2		263	65153-600-011	IDLER CLUTH ASS'Y	960550 (G-7)	
236	66674-611-210	SPRING F/E HEAD	SUS304-WPB		266	66614-607-820	HOLDER CAP MOTOR	SECC 20/20	
237	66654-605-010	BUSH ROLLER SUPPLY	C3602 BD		267	64769-052-025	MOTOR CAPSTAN	VCM 4730AL	
238	65165-700-410	FLANGE UPPER	CERAMIC		268	65124-600-011	CAPSTAN HOLDER ASS'Y	PC 30% GF	
					269	65224-802-120	CAPSTAN FLY WHEEL ASS'Y	ZD02+SUS	
					270	66614-607-810	BRKT CAP FLY WHEEL	SECCE 20/20	
					271	65274-600-811	CAPSTAN BELT	DC-66	
					272	65274-600-711	IDLER BELT	CY-65	
					273	65253-602-010	PLATE MAIN SLIDE	SECCE 20/20	

* S.N.A.: Service Not Available

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
274	65253-602-110	I.B SLIDE ASSY	SECC+SUM+SUS		545	63005-005-032	PWB-SENSOR (S)	94VO 1.6T×45×35 (G-7)	
275	66834-602-510	SLIDE STOPPER	CY-65		546	63054-220-530	WIRE GROUND	1007 #16 75 BLACK	
276	66674-613-110	SPRING I.B SLIDE	SUS 304-WPB		Q001	62139-701-020	TRANSISTOR	KSR2001	
277	65293-600-011	LOADING MOTOR ASSY	960 490 (G-7)		Q002	62139-701-020	TRANSISTOR	KSR2001	
280	66824-600-610	TIE BAND	NYLON 616 100		Q003	62139-401-055	TR-PHOTO	PN202S (R)	
401	66804-622-410	HEAD BRUSH ASSY	PIN VRYSH+DEMPER+B.E		Q004	62139-401-055	TR-PHOTO	PN202S (R)	
520	66674-608-110	GROUND TOP PLATE	PB SP T0.15		910	67108-600-010	SCREW TAP PH	2S-M3×5 FE FZY	
902-1	67004-100-710	SCREW-PH	+M3×4 FE FZY		909	67154-101-310	SCREW TAP PWH	1S-M3×8 FE FZY	
902	67004-101-414	SCREW-BH	M3×4 FE FZY		CN206	63053-612-615	LEAD CONNECTOR ASSY	1429 #26 RED 150 CN206	
905	67004-101-413	SCREW-BH	M3×3 FE FZY						
906	67008-130-061	SCREW-PH	+M3×6 FE FZY						
907	67004-100-710	SCREW-PH	+M3×4 FE FZY						
908	67008-130-061	SCREW-PH	+M3×5 FE FZY						
918	67094-700-710	SCREW-PWH	+M3×6 FE FZY						
953	67304-103-430	WASHER-PLAIN	3.2×6×0.13 POLY SLIDE						
954	67304-600-410	WASHER-PLAIN	PI3.1×PI8×T0.5						
955	67304-700-610	WASHER PLAIN	42×8×0.5 POLY SLIDE						
956-1	66864-600-410	WASHER-DUST	6×0.5 POLY AMID						
972	67358-104-006	RING-E	PI4 SUS 304-CSP						
973	67358-102-506	RING-E	PI2.5 STSC 304-CSP						
Housing Assembly									
501	66122-700-490	HOUSING ASSY	F/L SYSTEM (G-7)	S.N.A.					
502	69000-470-010	ASSY HOUSING CHASSIS	F/L SYSTEM (G-7)						
503	66022-600-320	SIDE CHASSIS (R)	ABS G20						
504	66022-600-420	SIDE CHASSIS (L)	ABS G20						
505	66463-601-210	CASSETTE-GUIDE	ABS (BLK)						
506	65104-612-010	RELAY SHAFT	SUM-2						
507	65204-603-010	RELAY GUIDE (R)	DURACON (M90-44)						
508	65204-603-110	RELAY GUIDE (L)	DURACON (M90-44)						
509	65254-608-510	MASK CAM LEVER	DURACON (M90-44)						
510	69000-470-020	ASSY-CASSETTE HOLDER	F/L SYSTEM (G7)						
511	66132-600-110	CASSETTE HOLDER	SECC-E20/20 T1.2						
512	66054-604-310	KEY-CASSETTE	DURACON+SUS 304 T0.5						
513	66674-612-610	CASSETTE HOLDER SPR	SVS 304 T0.15						
514	65104-612-110	HOLDER SHAFT (R)	SUM-2 (H)						
515	65104-612-210	HOLDER SHAFT (L)	SUM-2 (H)						
516	65104-612-310	GUIDE PIN (R)	SUM-2 (H)						
517	65104-612-410	GUIDE PIN (L)	SUM-2 (H)						
518	65104-612-510	VERTICAL GUIDE PIN	SUM-2 (H)						
519	66152-600-110	UPPER CHASSIS	SEC-E 20/20 1.0						
520	66674-608-110	GOUND-PLATE TOP	PBSP T0.15						
521	65202-600-220	SIDE ARM (R)	DURACON (M90-44)						
522	66674-616-410	ARM TORSION SPRING R	SWP-B P1.0						
523	65202-600-320	SIDE ARM (L)	DURACON (M90-44)						
524	66674-616-310	ARM TORSION SPRING L	SWP-B P1.0						
525	65203-600-720	ARM GEAR	NYLON 66 (CM300)						
526	66664-605-510	ARM GEAR PIN	SUS 420 J2-8						
527	66674-616-610	EJECT SPRING	SWP-B						
528	65203-600-810	SIDE BEBEL GEAR	DURACON (M90-44)						
529	65203-600-620	TIMING GEAR	DURACON (M90-44)						
530	66153-600-610	GEAR HOLDER PLUTE	SECC-E20/20 T1.0						
531	66463-601-310	LID OPENER	DURACON (M90-44)						
532	66674-616-510	LID OPENER SPING	SWP-B P10.5						
533	67642-601-112	FRONT-MASK	ACRYL						
534	66674-602-610	MASK-SPRING	SUS 304						
535	63569-700-210	REC SAFTY-SW	MSW-1485 NBKU						
536	63054-220-400	LEAD WIRE	1429 #26 GRAY 365						
537	63054-220-410	LEAD WIRE	1429 #26 BLUE 183						
538	63569-700-310	CASSETTE-SW	MSW-1429CA						
539	63054-220-420	LEAD WIRE	1429 #26 BROWN 195						
540	63054-220-430	LEAD WIRE	1420 #26 BLACK 180						
541	63005-005-033	PWB-SENSOR (E)	94VO 1.6T×21.5×25 (G-7)						
542	63054-220-440	LEAD WIRE	1429 #26 BLUE 288						
543	63054-220-450	LEAD WIRE	1429 #26 RED 280						
544	63054-220-460	LEAD WIRE	1429 #26 ORANGE 285						

*S.N.A.: Service not available.

6-2. ELECTRICAL REPLACEMENT PARTS LIST

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
69000-270-065 ASSY-JOINT BOARD D7-NR2					D705	62169-406-482	DIODE	1N4148 SAMSUNG	
279	63005-004-064	PWB-DECK JOINT (G-7)	94VO 1.6x161x63	S.N.A	D706	62169-406-482	DIODE	1N4148 SAMSUNG	
IC205	62119-103-616	IC	BA6209		D707	62169-406-482	DIODE	1N4148 SAMSUNG	
IC206	62119-103-616	IC	BA6209		D708	62169-406-482	DIODE	1N4148 SAMSUNG	
Q209	62139-302-741	TRANSISTOR	KSC945-Y SAMSUNG		LD701	62309-110-340	LED	GL3HD7/GL3HD8	
Q204	62139-702-013	TRANSISTOR	KSR 1004		DT1	62319-013-044	DIGITRON	6-MT-86GK	
Q205	62139-103-381	TRANSISTOR	KSA733-Y SAMSUNG			63005-006-351	PWB-FIT (VX-720)	1V1 1.6x186x324	
Q208	62139-103-381	TRANSISTOR	KSA733-Y SAMSUNG		CN701	63053-607-620	LEAD CONNECTOR ASSY	1429/1061 #26 WHT 180 CN203	
R248	61048-177-683	R-METAL FILM	RM1/8TS 68K-J		CN703	63053-607-790	LEAD CONNECTOR ASSY	1429/1061 #26 WHT 130 CN703	
R249	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		CN702	63053-607-810	LEAD CONNECTOR ASSY	1429/1061 #26 WHT 470 CN702	
R250	61048-177-222	R-METAL FILM	RM1/8TS 2.2K-J			63104-800-110	GROUND-CAP	PBSS T0.5 G-7C	
R241	61048-177-391	R-METAL FILM	RM1/8TS 390-J		SW720	63519-073-020	SWITCH-SLIDE	SSS 323	
R242	61048-177-221	R-METAL FILM	RM1/8TS 220-J		SW701	63599-016-073	SWITCH-TACT	KPT-1105A	
R243	61049-527-689	R-METAL OXIDE	RS2P 6.8-J		SW702	63599-016-073	SWITCH-TACT	KPT-1105A	
R244	61044-427-339	R-METAL OXIDE	RS1P 3.3-J		SW703	63599-016-073	SWITCH-TACT	KPT-1105A	
R001	61048-177-100	R-METAL FILM	RM1/8TS 10-J		SW704	63599-016-073	SWITCH-TACT	KPT-1105A	
R251	61048-177-474	R-METAL FILM	RM1/8TS 470K-J		SW705	63599-016-073	SWITCH-TACT	KPT-1105A	
R252	61048-177-224	R-METAL FILM	RM1/8TS 220K-J		SW706	63599-016-073	SWITCH-TACT	KPT-1105A	
C229	61417-109-210	C-CERAMIC HK	DK45F TAPG 50V 0.1M-Z		SW707	63599-016-073	SWITCH-TACT	KPT-1105A	
C230	61419-109-210	C-CERAMIC HK	CK45F 50V 0.1M-J		SW708	63599-016-073	SWITCH-TACT	KPT-1105A	
C231	61419-109-210	C-CERAMIC HK	CK45F 50V 0.1M-J		SW709	63599-016-073	SWITCH-TACT	KPT-1105A	
C232	61417-109-210	C-CERAMIC HK	DK45F TAPG 50V 0.1M-Z		SW710	63599-016-073	SWITCH-TACT	KPT-1105A	
C233	61609-803-120	C-ELECTROLYTIC NP	CE04W 16V 10M		SW711	63599-016-073	SWITCH-TACT	KPT-1105A	
C234	61609-401-470	C-ELECTROLYTIC	CE04W 16V 100M		SW712	63599-016-073	SWITCH-TACT	KPT-1105A	
L201	62429-813-220	COIL-PEAKING	EL0607-SK1-220K		SW713	63599-016-073	SWITCH-TACT	KPT-1105A	
L202	62429-014-091	COIL-CHOKE	H5B T3-6-15-2		SW714	63599-016-073	SWITCH-TACT	KPT-1105A	
CN204	63349-062-590	CONNECTOR-WAFER	5268-10A		SW715	63599-016-073	SWITCH-TACT	KPT-1105A	
CN205	63349-062-620	CONNECTOR-WAFER	5268-13A		SW716	63599-016-073	SWITCH-TACT	KPT-1105A	
CN206	63349-062-550	CONNECTOR-WAFER	5268-06A		RM701	64529-312-010	REMOCON MODULE	SV-06A	
CN207	63349-062-520	CONNECTOR-WAFER	5268-03A			66603-605-310	HOLDER-TIMER	ABS 94HB (SV-660)	
CN209	63349-062-530	CONNECTOR-WAFER	5268-04A			66604-607-510	HOLDER-POWER	ABS 94HB (VFT39)	
CN210	63349-062-311	CONNECTOR-WAFER	5267-02A (BLK)		69780-603-203 ASSY-FUNCTION PAL (G-7) VI/VB/VX-720				
CN211	63349-062-310	CONNECTOR-WAFER	5267-02A			63349-083-158	CONNECTOR WAFER	S8B-PH	
CN212	63349-062-511	CONNECTOR-WAFER	5268-02A (RED)		SW801	63599-016-073	SWITCH-TACT	KPT-1105A	
CN213	63349-062-510	CONNECTOR-WAFER	5268-02A		SW802	63599-016-073	SWITCH-TACT	KPT-1105A	
CN214	63349-062-540	CONNECTOR-WAFER	5268-05A		SW803	63599-016-073	SWITCH-TACT	KPT-1105A	
69771-603-215 ASSY-FUN/TIMER PAL (G-7) VX-720					SW804	63599-016-073	SWITCH-TACT	KPT-1105A	
R701	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		SW805	63599-016-073	SWITCH-TACT	KPT-1105A	
R702	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		SW806	63599-016-073	SWITCH-TACT	KPT-1105A	
R703	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		SW807	63599-016-073	SWITCH-TACT	KPT-1105A	
R704	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		SW808	63599-016-073	SWITCH-TACT	KPT-1105A	
R709	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		SW809	63599-016-073	SWITCH-TACT	KPT-1105A	
R711	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		SW810	63599-016-073	SWITCH-TACT	KPT-1105A	
R712	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		69790-603-209 ASSY-HARNESS COMMON G-7W PAL				
R710	61048-177-271	R-METAL FILM	RM1/8TS 270-J			63053-607-011	LEAD CONNECTOR ASSY	1427/1007 #26 BLK 360 CN205	
R705	61048-177-473	R-METAL FILM	RM1/8TS 47K-J			63053-607-021	LEAD CONNECTOR ASSY	1427/1007 #26 BLK 170 CN204	
R706	61048-177-473	R-METAL FILM	RM1/8TS 47K-J			63053-607-050	LEAD CONNECTOR ASSY	1429/1007 #26 BLK 130 CN302	
R707	61048-177-473	R-METAL FILM	RM1/8TS 47K-J			63053-607-480	LEAD CONNECTOR ASSY	1429/1007 #26 BLK 190 CN801	
R708	61048-177-473	R-METAL FILM	RM1/8TS 47K-J			63053-607-630	LEAD CONNECTOR ASSY	1429/1007 #26 BLK 180 CN304	
VR702	61203-107-050	VR-ROUND	RK09K1130-20KB			63053-607-650	LEAD CONNECTOR ASSY	1429/1007 #26 BLK 260 CN303	
VR701	61203-107-060	VR-ROUND	RK09K1130-500KB						
VR703	61243-103-020	VR-SEMI	SR 19D-47KB						
C701	61419-109-140	C-CERAMIC HK	CK45 F 50V 0.01M-Z						
C702	61609-101-440	C-ELECTROLYTIC	CE04W 16V 22M						
C703	61709-402-060	C-ELECTROLYTIC	CE04W 35V 10M						
IC701	62109-502-010	IC	MSC 1165RS						
DQ701	62137-701-013	TRANSISTOR	KSR 1004 TAPG						
D701	62169-406-482	DIODE	1N4148 SAMSUNG						
D702	62169-406-482	DIODE	1N4148 SAMSUNG						
D703	62169-406-482	DIODE	1N4148 SAMSUNG						
D704	62169-406-482	DIODE	1N4148 SAMSUNG						

*S.N.A: Service Not Available.

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
69098-600-710 REGULATOR-ASS'Y PAL (G-7)					67154-600-640 SCREW TAP WASHER 2S 3x10 ZN-Y				
C104	60849-100-100	BELT	FREE UP BELT	S.N.A	67154-600-650 SCREW TAP RH2S 4x8 CUT ZN-Y				
	61609-144-103	CAPACITOR (E.C)	35V 1000 MICF (S.H) CASE VENT		60469-600-150 ADHESIVE #1600H DIABOND				
C102	61609-144-332	CAPACITOR (E.C)	35V 3300 MICF (S.H) CASE VENT		60469-600-100 SOLDER SN 50% 1.6PHI				
C103	61609-132-332	CAPACITOR (E.C)	16V 3300 MICF (S.H)		60469-600-160 SOLDER BAR 60%				
C110	61607-402-210	CAPACITOR (E.C)	50V 1MICF (S.H)		60469-600-110 SILICON GREASE G-746				
C111	61607-402-210	CAPACITOR (E.C)	50V 1MICF (S.H)		60469-600-120 TRICHLORD ETHANE GENKLENE LV				
C112	61607-402-210	CAPACITOR (E.C)	50V 1MICF (S.H)		60469-600-130 ISO PROPYL ALCOHOL (CH3)2 CHOH				
C109	61607-401-430	CAPACITOR (E.C)	16V 10MICF (S.H)		60469-600-140 SOLDER FLUX FR-207				
C108	61607-122-221	CAPACITOR (E.C)	50V 22MICF (S.H)		69099-605-100 REMOCON ASS'Y PR/427 (W/L)				
C113	61607-401-479	CAPACITOR (E.C)	16V 47MICF (S.H)		66151-600-310 COVER TOP REMOCON ABS 94HB BLK				
C115	61607-401-479	CAPACITOR (E.C)	16V 47MICF (S.H)		66152-600-620 COVER BUTTOM REMOCON ABS 94HB BLK				
C116	61607-122-471	CAPACITOR (E.C)	25V 47MICF (S.H)		67644-600-120 DOOR BATTERY ABS 94HB BLK				
C106	61609-124-473	CAPACITOR (E.C)	50V 47MICF (S.H)		67613-607-810 INLAY COVER REMOCON PVC SHEET T0.5				
C117	61609-124-473	CAPACITOR (E.C)	50V 47MICF (S.H)		67654-607-902 WINDOW REMOCON ACRYL				
C107	61609-124-473	CAPACITOR (E.C)	50V 47MICF (S.H)		67872-600-310 KEY REMOCON RUBBER SILICON				
C105	61609-124-471	CAPACITOR (E.C)	100V 47MICF (S.H)		66674-611-010 SPRING REMOCON (A) PBR 2-1/4				
C114	61607-401-470	CAPACITOR (E.C)	16V 100MICF (S.H)		66673-600-510 SPRING (B) SUS 304 T0.4				
LF101	63005-004-958	PCB	XPC-FR-1 (G-7 PAL)		64539-102-311 CERAMIC RESONATOR CSB 455 EBL				
	62429-014-115	LINE FILTER	SQ HL38		61409-101-360 C-CERAMIC CC45SL 100J				
	62869-190-072	POWER TRANS	E160x30 (711) 5.1V WIDE		62149-301-431 TRANSISTOR MSC 1008Y				
		BRKT-HEAT SINK	AL T2.0		62309-112-030 LED IR EL-IL2				
	60659-431-573	TAP STUD	SPC T0.5		62119-601-581 IC TC9012MF-001				
	60659-431-574	AC IN COVER	PET T1.0		61018-177-109 RESISTOR RM1/8TS 1.0-J				
	60659-431-575	COVER CAPACITOR	PET T0.8		61602-121-470 C-ELECTROLYTIC 6.3V 4uF (RSS)				
	60659-431-576	FUSE COVER	PET T1.0		63005-006-187 PWB-REMOCON S.N.A				
	63054-220-470	GROUND WIRE	110.16 300V 180AY		68623-604-030 BOX REMOCON ART PAPER S.N.A				
	63054-801-140	POWER CORD AC	KKP419C STOPPER		69702-603-201 ASSY-MAIN B;PAL (G-7W)-A				
63349-062-410	CONNECTOR WAFER	5267-12A (MOLEX)	AUDIO-PART; PAL (G-7)-A						
63354-600-020	CONNECTOR ASSY	G-7 PAL							
F102	64709-084-771	FUSE	5x20 T2.5A 250V	S.N.A	R0504	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
F101	64709-084-772	FUSE	5x20 T500MA 250V		R0513	61048-177-123	R-METAL FILM	RM1/8TS 12K-J	
	64709-084-773	FUSE CLIP	RBP4-1 1/2H SV9500		R0505	61048-177-105	R-METAL FILM	RM1/8TS 1M-K	
IC101	62119-101-430	IC	STK5333 (KTS)		R0515	61048-177-122	R-METAL FILM	RM1/8TS 1.2K-J	
IC102	62109-201-282	IC	MC7812 (SST)		R0503	61048-177-151	R-METAL FILM	RM1/8TS 150-J	
Q101	62139-302-748	TRANSISTOR	KSC945-Y (SST)		R0501	61048-177-153	R-METAL FILM	RM1/8TS 15K-J	
Q102	62139-302-748	TRANSISTOR	KSC945-Y (SST)		R0509	61048-177-182	R-METAL FILM	RM1/8TS 1.8K-J	
Q103	62139-701-017	TRANSISTOR	KSR1008		R0514	61048-177-223	R-METAL FILM	RM1/8TS 22K-J	
D104	62169-201-060	DIODE	IN4002 (DONG SUNG)		R0511	61048-177-272	R-METAL FILM	RM1/8TS 2.7K-J	
D102	62169-201-060	DIODE	IN4002 (DONG SUNG)		R0508	61048-177-332	R-METAL FILM	RM1/8TS 3.3K-J	
D103	62169-406-482	DIODE	IN4148		R0502	61048-177-334	R-METAL FILM	RM1/8TS 330K-J	
D101	62169-403-850	DIODE	(B.D) RBV402		R0507	61048-177-473	R-METAL FILM	RM1/8TS 47K-J	
ZD101	62169-403-860	DIODE	EQA02-23A (FUJI)		R0506	61048-177-513	R-METAL FILM	RM1/8TS 51K-J	
ZD102	62169-403-870	DIODE	EQA02-07A (FUJI)		R0512	61048-177-563	R-METAL FILM	RM1/8TS 56K-J	
R104	61048-227-102	RESISTOR (M.F)	RM1/4P 1K-J		R0516	61048-177-683	R-METAL FILM	RM1/8TS 68K-J	
R102	61048-227-102	RESISTOR (M.F)	RM1/4P 1K-J		R0517	61048-177-683	R-METAL FILM	RM1/8TS 68K-J	
R105	61048-227-102	RESISTOR (M.F)	RM1/4P 1K-J		R0519	61048-177-683	R-METAL FILM	RM1/8TS 68K-J	
R110	61048-227-103	RESISTOR (M.F)	1/4P 10K ±5%		VR0501	61246-105-103	VR-SEMI	RH0615C 10KB	
R101	61048-227-103	RESISTOR (M.F)	1/4P 10K ±5%		VR0502	61246-105-224	VR-SEMI	RH0615C 220KB	
R111	61048-227-121	RESISTOR (M.F)	1/4P 120K ±5%		C0521	61407-101-440	C-CERAMIC TEMP	CC45 SL TAPG 50V 220-J	
R112	61048-227-121	RESISTOR (M.F)	1/4P 120K ±5%		C0516	61507-121-340	C-POLYESTER	CQ921M TAPG 100V	
R103	61048-227-182	RESISTOR (M.F)	1/4P 1.8K ±5%		C0502 61507-121-370 C-POLYESTER				
R108	61048-227-272	RESISTOR (M.F)	1/4P 2.7K ±5%		C0519 61507-121-430 C-POLYESTER				
R109	61048-227-472	RESISTOR (M.F)	1/4P 4.7K ±5%		C0511 61507-121-451 C-POLYESTER				
R106	61048-227-561	RESISTOR (M.F)	1/4P 560 ±5%		C0503 61507-121-470 C-POLYESTER				
R107	61048-227-822	RESISTOR (M.F)	1/4P 8.2K ±5%		C0518 61507-121-470 C-POLYESTER				
FR102	61099-605-070	FUSEABLE RESISTOR	FR1/4 2.0-J						
FR101	61099-605-071	FUSEABLE RESISTOR	FR1/4 1.2-J						
C101	61409-601-320	CAPACITOR (LA)	ECK-DNS472ME						
	60509-400-116	WIRE-SO COPPER	TA0.6SN						
	67154-600-620	SCREW	TAP WASHER 2S 3x15 ZN-Y						
	67154-600-630	SCREW	TAP WASHER 2S 3x8 CUT ZN-Y						

*S.N.A: Service Not Available.

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
C0520	61507-121-480	C-POLYESTER	CQ921M TAPG 100V 0.015M-K		R0384	61048-177-183	R-METAL FILM	RM1/8TS 18K-J	
C0508	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R0317	61048-177-202	R-METAL FILM	RM1/8TS 2K-J	
C0504	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M		R0323	61048-177-202	R-METAL FILM	RM1/8TS 2K-J	
C0506	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M		R0324	61048-177-202	R-METAL FILM	RM1/8TS 2K-J	
C0515	61607-401-450	C-ELECTROLYTIC	CE04W TAPG 16V 33M		R0366	61048-177-202	R-METAL FILM	RM1/8TS 2K-J	
C0507	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M		R0307	61048-177-221	R-METAL FILM	RM1/8TS 220-J	
C0512	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M		R0352	61048-177-221	R-METAL FILM	RM1/8TS 220-J	
C0513	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M		R0380	61048-177-221	R-METAL FILM	RM1/8TS 220-J	
C0501	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M		R0321	61048-177-222	R-METAL FILM	RM1/8TS 2.2K-J	
C0510	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M		R0312	61048-177-222	R-METAL FILM	RM1/8TS 2.2K-J	
C0514	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M		R0337	61048-177-222	R-METAL FILM	RM1/8TS 2.2K-J	
C0517	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M		R0334	61048-177-223	R-METAL FILM	RM1/8TS 2.2K-J	
C0505	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M		R0385	61048-177-223	R-METAL FILM	RM1/8TS 2.2K-J	
IC0502	62109-301-641	IC	UPC1513		R0306	61048-177-271	R-METAL FILM	RM1/8TS 270-J	
IC0501	62119-103-620	IC	BA7751LS		R0381	61048-177-271	R-METAL FILM	RM1/8TS 270-J	
L0503	62427-812-101	COIL PEAKING	EL0608RA-101J (100UH) TAPG		R0348	61048-177-151	R-METAL FILM	RM1/8TS 150-J	
L0501	62429-010-280	COIL PEAKING	BOAM-22MH		R0316	61048-177-272	R-METAL FILM	RM1/8TS 2.7K-J	
L0502	62429-010-280	COIL PEAKING	BOAM-22MH		R0343	61048-177-272	R-METAL FILM	RM1/8TS 2.7K-J	
L0504	62429-014-122	COIL OSC	70KHz 9V BLOCK		R0356	61048-177-274	R-METAL FILM	RM1/8TS 270K-J	
	63054-211-070	WIRE-GND ASSY	1007 #18 120 BLK AA		R0358	61048-177-302	R-METAL FILM	RM1/8TS 3K-J	
	63364-113-621	CONNECTOR-TERMINAL	5033-4T		R0361	61048-177-302	R-METAL FILM	RM1/8TS 3K-J	
	63054-211-090	WIRE-GND ASSY	1007 #18 190 BLK AA		R0327	61048-177-332	R-METAL FILM	RM1/8TS 3.3K-J	
	63304-113-621	CONNECTOR-TERMINAL	5033-4T		R0335	61048-177-332	R-METAL FILM	RM1/8TS 3.3K-J	
	63054-211-090	WIRE-GND ASSY	1007 #18 190 BLK AA		R0303	61048-177-333	R-METAL FILM	RM1/8TS 33K-J	
	63304-113-621	CONNECTOR-TERMINAL	5033-4T		R0362	61048-177-333	R-METAL FILM	RM1/8TS 33K-J	
	63054-211-090	WIRE-GND ASSY	1007 #18 190 BLK AA		R0367	61048-177-333	R-METAL FILM	RM1/8TS 33K-J	
	63304-113-621	CONNECTOR-TERMINAL	5033-4T		R0369	61048-177-333	R-METAL FILM	RM1/8TS 33K-J	
	63054-211-090	WIRE-GND ASSY	1007 #18 190 BLK AA		R0339	61048-177-361	R-METAL FILM	RM1/8TS 360-J	
	63304-113-621	CONNECTOR-TERMINAL	5033-4T		R0365	61048-177-392	R-METAL FILM	RM1/8TS 3.9K-J	
	63054-301-690	WIRE-SHIELD	1533 \$26 AA BLU 220		R0305	61048-177-471	R-METAL FILM	RM1/8TS 470-J	
	63054-301-690	WIRE-SHIELD	1533 \$26 AA BLU 220		R0313	61048-177-471	R-METAL FILM	RM1/8TS 470-J	
	63124-103-330	PINTEST POINT	BSW 1/4H P11.0SN		R0350	61048-177-471	R-METAL FILM	RM1/8TS 470-J	
CN302	63349-062-370	CONNECTOR WAFER	5267-08A		R0326	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J	
CN301	63349-062-410	CONNECTOR WAFER	5267-12A		R0377	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J	
VIDEO-PART, PAL (G-7)-A					R0383	61048-177-473	R-METAL FILM	RM1/8TS 47K-J	
R3100	61048-177-101	R-METAL FILM	RM1/8TS 100-J		R0319	61048-177-474	R-METAL FILM	RM1/8TS 470K-J	
R0302	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0341	61048-177-474	R-METAL FILM	RM1/8TS 470K-J	
R0308	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0368	61048-177-474	R-METAL FILM	RM1/8TS 470K-J	
R0309	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0320	61048-177-511	R-METAL FILM	RM1/8TS 510-J	
R0325	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0310	61048-177-561	R-METAL FILM	RM1/8TS 560-J	
R3106	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0345	61048-177-562	R-METAL FILM	RM1/8TS 5.6K-J	
R3070	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0340	61048-177-564	R-METAL FILM	RM1/8TS 560K-J	
R0371	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0380	61048-177-684	R-METAL FILM	RM1/8TS 680K-J	
R0372	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0314	61048-177-681	R-METAL FILM	RM1/8TS 680-J	
R0373	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0357	61048-177-681	R-METAL FILM	RM1/8TS 680-J	
R0374	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0363	61048-177-682	R-METAL FILM	RM1/8TS 6.8K-J	
R0375	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R3110	61048-177-333	R-METAL FILM	RM1/8TS 33K-J	
R3105	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R3111	61048-177-823	R-METAL FILM	RM1/8TS 82K-J	
R0338	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R0315	61048-177-821	R-METAL FILM	RM1/8TS 820-J	
R0333	61048-177-104	R-METAL FILM	RM1/8TS 100K-J		R0353	61048-177-821	R-METAL FILM	RM1/8TS 820-J	
R0387	61048-177-104	R-METAL FILM	RM1/8TS 100K-J		R0379	61048-177-821	R-METAL FILM	RM1/8TS 820-J	
R0301	61048-177-122	R-METAL FILM	RM1/8TS 1.2K-J		R3103	61048-177-821	R-METAL FILM	RM1/8TS 820-J	
R0382	61048-177-122	R-METAL FILM	RM1/8TS 1.2K-J		R0322	61048-177-822	R-METAL FILM	RM1/8TS 8.2K-J	
R0344	61048-177-123	R-METAL FILM	RM1/8TS 12K-J		R0346	61048-177-822	R-METAL FILM	RM1/8TS 8.2K-J	
R0342	61048-177-123	R-METAL FILM	RM1/8TS 12K-J		R0359	61048-177-823	R-METAL FILM	RM1/8TS 82K-J	
R0311	61048-177-222	R-METAL FILM	RM1/8TS 2.2K-J		R0318	61048-177-471	R-METAL FILM	RM1/8TS 470-J	
R0336	61048-177-153	R-METAL FILM	RM1/8TS 15K-J		VR0303	61246-105-103	VR-SEMI	RH0615C 10KB	
R0364	61048-177-153	R-METAL FILM	RM1/8TS 15K-J		VR0304	61246-105-103	VR-SEMI	RH0615C 10KB	
R0376	61048-177-153	R-METAL FILM	RM1/8TS 15K-J		VR0305	61246-105-103	VR-SEMI	RH0615C 10KB	
R0304	61048-177-153	R-METAL FILM	RM1/8TS 15K-J		VR0306	61246-105-103	VR-SEMI	RH0615C 10KB	
R0351	61048-177-181	R-METAL FILM	RM1/8TS 180-J		VR0307	61246-105-103	VR-SEMI	RH0615C 10KB	
R3102	61048-177-181	R-METAL FILM	RM1/8TS 180-J		VR0308	61246-105-103	VR-SEMI	RH0615C 10KB	
R0347	61048-177-182	R-METAL FILM	RM1/8TS 1.8K-J		VR0302	61246-105-472	VR-SEMI	RH0615C 4.7KB	
R0378	61048-177-182	R-METAL FILM	RM1/8TS 1.8K-J		VR0309	61246-105-472	VR-SEMI	RH0615C 4.7KB	
R0386	61048-177-182	R-METAL FILM	RM1/8TS 1.8K-J		VR0301	61246-105-472	VR-SEMI	RH0615C 4.7KB	
R0349	61048-177-182	R-METAL FILM	RM1/8TS 1.8K-J		C0322	61407-101-240	C-CERAMIC, TEMP	CC45SL TAPG 50V 33-J	
R0354	61048-177-182	R-METAL FILM	RM1/8TS 1.8K-J		C0315	61407-101-360	C-CERAMIC, TEMP	CC45SL TAPG 50V 100-J	
					C0366	61407-101-360	C-CERAMIC, TEMP	CC45SL TAPG 50V 100-J	

*S.N.A: Service Not Available.

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
C0389	61407-101-380	C-CERAMIC. TEMP	CC45SL TAPG 50V 100-J		C3102	61507-121-470	C-POLYESTER	CQ921M TAPG 100V 0.01M-J	
C0312	61407-101-380	C-CERAMIC. TEMP	CC45SL TAPG 50V 120-J		C0395	61507-121-571	C-POLYESTER	CQ921M TAPG 100V 0.068M-J	
C0330	61407-101-380	C-CERAMIC. TEMP	CC45SL TAPG 50V 120-J						
C3100	61407-101-730	C-CERAMIC. TEMP	CC45SL TAPG 50V 150-J		C0339	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C0382	61407-101-420	C-CERAMIC. TEMP	CC45SL TAPG 50V 180-J		C0346	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C3121	61407-101-470	C-CERAMIC. TEMP	CC45SL TAPG 50V 300-J		C0354	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C0356	61407-101-510	C-CERAMIC. TEMP	CC45SL TAPG 50V 470-J		C0368	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C0340	61407-101-511	C-CERAMIC. TEMP	CC45SL TAPG 50V 510-J		C3104	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C0365	61407-101-730	C-CERAMIC. TEMP	CC45SL TAPG 50V 150-K		C3106	61607-401-450	C-ELECTROLYTIC	CE04W TAPG 16V 33M	
C0316	61407-105-250	C-CERAMIC. TEMP	CC45CH TAPG 50V 39-J		C0347	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C0341	61407-105-250	C-CERAMIC. TEMP	CC45CH TAPG 50V 39-J		C0332	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C0328	61407-105-260	C-CERAMIC. TEMP	CC45CH TAPG 50V 47-J		C0308	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C0377	61407-105-270	C-CERAMIC. TEMP	CC45CH TAPG 50V 27-J		C0334	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C0323	61407-105-300	C-CERAMIC. TEMP	CC45CH TAPG 50V 68-J		C3105	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C0350	61407-105-300	C-CERAMIC. TEMP	CC45CH TAPG 50V 68-J		C0324	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C0361	61407-105-320	C-CERAMIC. TEMP	CC45CH TAPG 50V 82-J		C3120	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
C0351	61407-105-320	C-CERAMIC. TEMP	CC45CH TAPG 50V 82-J		C0357	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
C0303	61407-105-250	C-CERAMIC. TEMP	CC45CH TAPG 50V 39-J		C0392	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
C0399	61407-105-320	C-CERAMIC. TEMP	CC45CH TAPG 50V 82-J		C3121	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
C0310	61407-105-320	C-CERAMIC. TEMP	CC45CH TAPG 50V 82-J		C3122	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
C0327	61407-105-660	C-CERAMIC. TEMP	CC45CH TAPG 50V 5-D		C0335	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M	
C0370	61407-105-690	C-CERAMIC. TEMP	CC45CH TAPG 50V 51-J		C0301	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M	
C0378	61407-105-690	C-CERAMIC. TEMP	CC45CH TAPG 50V 51-J		C0353	61607-401-630	C-ELECTROLYTIC	CE04W TAPG 35V 4.7M	
C0329	61407-105-850	C-CERAMIC. TEMP	CC45CH TAPG 50V 8-D		C0326	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C0373	61407-105-860	C-CERAMIC. TEMP	CC45CH TAPG 50V 10-D		C0355	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C0302	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0325	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C0304	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0338	61607-402-421	C-ELECTROLYTIC	CE04W TAPG 50V 0.22M	
C0307	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0367	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0309	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0371	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0311	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0375	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0313	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0384	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0314	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0398	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0317	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0390	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0318	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0321	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C0320	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0336	61607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C0331	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0352	61607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C0333	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0369	61607-402-421	C-ELECTROLYTIC	CE04W TAPG 50V 0.22M	
C0337	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		IC0304	62119-101-735	IC	TA8644N	
C0342	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		IC0303	62119-101-742	IC	TA8605N	
C0348	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		IC0302	62119-101-743	IC	TA8606N	
C0349	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		IC0301	62119-101-744	IC	TA8607P	
C0358	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		IC0305	62119-101-755	IC	MSM6965-3RS	
C0359	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		IC0306	62119-103-614	IC	BA7007-L	
C0360	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0302	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
C0363	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		C0319	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
C0374	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0303	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
C0379	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0304	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
C0380	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0305	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
C0381	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0307	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
C0383	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0301	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C0385	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0306	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C0386	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0308	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C0387	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0309	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C0388	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0311	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C0391	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		Q0312	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C0393	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		D0302	62169-406-482	DIODE	1N4148 SAMSUNG	
C0394	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		D0303	62169-406-482	DIODE	1N4148 SAMSUNG	
C0396	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		D0304	62169-406-482	DIODE	1N4148 SAMSUNG	
C0397	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		D0305	62169-406-482	DIODE	1N4148 SAMSUNG	
C3101	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		L0317	62427-812-100	COIL PEAKING	EL0606RA-100J (10UH) TAPG	
C3103	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z						
C0376	61507-121-390	C-POLYESTER	CQ921M TAPG 100V 0.0022M-K		L0311	62427-812-121	COIL PEAKING	EL0606RA-121J (120UH) TAPG	
C0372	61507-121-410	C-POLYESTER	CQ921M TAPG 50V 0.0033M-K		L0318	62427-812-150	COIL PEAKING	EL0606RA-150J (15UH) TAPG	
C0306	61507-121-431	C-POLYESTER	CQ921M TAPG 100V 0.0047M-J		L0316	62427-812-180	COIL PEAKING	EL0606RA-180J (18UH) TAPG	
C0364	61507-121-460	C-POLYESTER	CQ921M TAPG 100V 0.0082M-K						

*S.N.A: Service Not Available.

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
L0309	62427-812-181	COIL-PEAKING	EL0606RA 181-J (180UH) TAPG		R247	61048-177-474	R-METAL FILM	RM1/8TS 470K-J	
L0312	62427-812-220	COIL-PEAKING	EL0606RA-220J (22UH) TAPG		R201	61048-177-512	R-METAL FILM	RM1/8TS 5.1K-J	
L0302	62427-812-221	COIL-PEAKING	EL0606RA-221J (220UH) TAPG		R204	61048-177-512	R-METAL FILM	RM1/8TS 5.1K-J	
L0315	62427-812-221	COIL-PEAKING	EL0606RA-221J (220UH) TAPG		R240	61048-177-512	R-METAL FILM	RM1/8TS 5.1K-J	
L0306	62427-812-331	COIL-PEAKING	EL0606RA-331J (330UH) TAPG		R209	61048-177-563	R-METAL FILM	RM1/8TS 56K-J	
L0303	62427-812-470	COIL-PEAKING	EL0606RA-470J (47UH) TAPG		R210	61048-177-563	R-METAL FILM	RM1/8TS 56K-J	
L0307	62427-812-470	COIL-PEAKING	EL0606RA-470J (47UH) TAPG		R224	61048-177-563	R-METAL FILM	RM1/8TS 56K-J	
L0308	62427-812-470	COIL-PEAKING	EL0606RA-470J (47UH) TAPG		R225	61048-177-563	R-METAL FILM	RM1/8TS 56K-J	
L0301	62427-812-470	COIL-PEAKING	EL0606RA-470J (47UH) TAPG		R208	61048-177-682	R-METAL FILM	RM1/8TS 6.8K-J	
L0314	62427-812-680	COIL-PEAKING	EL0606RA-680J (68UH) TAPG		R226	61048-177-682	R-METAL FILM	RM1/8TS 6.8K-J	
L0313	62427-812-820	COIL-PEAKING	EL0606RA-82UH TAPG		R223	61048-177-684	R-METAL FILM	RM1/8TS 680K-J	
L0304	62427-812-829	COIL-PEAKING	EL0606 RA-8.2UH TAPG		R211	61048-177-820	R-METAL FILM	RM1/8TS 82-J	
L0305	62427-814-101	COIL-PEAKING AXIAL	BAL03 TAPG 101K		R229	61048-277-101	R-METAL FILM	RM1/4T 100-J	
L0319	62427-814-101	COIL-PEAKING AXIAL	BAL03 TAPG 101K		VR201	61246-105-473	VR-SEMI	RH0615C 47KB	
FL0305	62429-014-112	COIL-TRAP (1/2 FH)	7.8K TUNING-COIL		VR202	61246-105-473	VR-SEMI	RH0615C 47KB	
FL0304	62469-006-011	DELAY LINE	MS-31PC-5K		VR203	61246-105-474	VR-SEMI	RH0615C 470KB	
	63005-006-178	PWB-MAIN (B)	94VO 1.6x156x210 PAL G-7		C207	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z	
	63124-103-330	PINTEST POINT	BSW 1/4H P11.0 SN		C222	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z	
CN303	63349-062-360	CONNECTOR WAFER	5267-07A		C218	61417-109-210	C-CERAMIC. HK	CK45F TAPG 50V 0.1M-Z	
CN304	63349-062-380	CONNECTOR WAFER	5267-09A		C231	61507-121-390	C-POLYESTER	CQ921M TAPG 100V	
XTAL2	64529-310-010	FILTER-CERAMIC	SFE 4.5 MB					0.0022M-K	
FL0303	64529-401-200	FILTER-LC	SFB 4141		C212	61507-121-420	C-POLYESTER	CQ921M TAPG 100V 392-K	
FL0302	64529-401-210	FILTER-LC	SEL 4473		C223	61507-121-420	C-POLYESTER	CQ921M TAPG 100V 392-K	
FL0301	64529-431-085	FILTER-LC	SBP 63072		C236	61507-121-420	C-POLYESTER	CQ921M TAPG 100V 392-K	
XTAL1	64539-012-040	CRYSTAL	4.433619MHz		C213	61507-121-440	C-POLYESTER	CQ921M TAPG 100V	
L0320	62427-812-101	COIL-PEAKING	EL0606RA-101J (100UH) TAPG					0.0056M-K	
69757-603-201 ASS'Y-MAIN A: PAL (G-7W)-A					C230	61507-121-440	C-POLYESTER	CQ921M TAPG 100V	
SERVO-PAPT: PAL (G-7)-A								0.0056M-K	
R222	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		C208	61507-121-470	C-POLYESTER	CQ921M TAPG 100V	
R202	61048-177-102	R-METAL FILM	RM1/8TS 1K-J					0.01M-K	
R244	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		C241	61507-121-510	C-POLYESTER	CQ921M TAPG 100V	
R228	61048-177-103	R-METAL FILM	RM1/8TS 10K-J					0.022M-K	
R230	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		C205	61507-121-520	C-POLYESTER	CQ921M TAPG 50V	
R232	61048-177-103	R-METAL FILM	RM1/8TS 10K-J					0.027M-K	
R234	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		C209	61507-121-520	C-POLYESTER	CQ921M TAPG 50V	
R242	61048-177-103	R-METAL FILM	RM1/8TS 10K-J					0.027M-K	
R227	61048-177-104	R-METAL FILM	RM1/8TS 100K-J		C210	61507-121-520	C-POLYESTER	CQ921M TAPG 50V	
R236	61048-177-105	R-METAL FILM	RM1/8TS 1M-K					0.027M-K	
R216	61048-177-153	R-METAL FILM	RM1/8TS 15K-J		C209	61507-121-550	C-POLYESTER	CQ921M TAPG 50V	
R221	61048-177-153	R-METAL FILM	RM1/8TS 15K-J					0.047M-K	
R233	61048-177-273	R-METAL FILM	RM1/8TS 27K-J		C210	61507-121-550	C-POLYESTER	CQ921M TAPG 50V	
R219	61048-177-274	R-METAL FILM	RM1/8TS 270K-J					0.047M-K	
R241	61048-177-302	R-METAL FILM	RM1/8TS 3K-J		C203	61507-121-570	C-POLYESTER	CQ921M TAPG 100V	
R235	61048-177-303	R-METAL FILM	RM1/8TS 30K-J					0.068M-K	
R205	61048-177-331	R-METAL FILM	RM1/8TS 330-J		C216	61507-121-630	C-POLYESTER	CQ921M TAPG 100V 0.012MK	
R218	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		C202	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
R217	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		C211	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
R214	61048-177-334	R-METAL FILM	RM1/8TS 330K-J		C224	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
R215	61048-177-334	R-METAL FILM	RM1/8TS 330K-J		C226	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
R231	61048-177-392	R-METAL FILM	RM1/8TS 3.9K-J		C227	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
R238	61048-177-471	R-METAL FILM	RM1/8TS 470-J		C228	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
R246	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		C201	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
R239	61048-177-473	R-METAL FILM	RM1/8TS 47K-J		C237	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
R220	61048-177-474	R-METAL FILM	RM1/8TS 470K-J		C225	61607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M	
R237	61048-177-474	R-METAL FILM	RM1/8TS 470K-J		C217	61607-802-101	C-ELECTROLYTIC NP	CE04W TAPG 16V 100M	
					C215	61607-803-120	C-ELECTROLYTIC NP	CE04W TAPG 16V 10M	
					C204	61607-803-210	C-ELECTROLYTIC NP	CE04W TAPG 50V 1M	
					C219	61607-803-210	C-ELECTROLYTIC NP	CE04W TAPG 50V 1M	
					IC203	62119-101-746	IC	TA 8617S	
					IC204	62119-101-751	IC	TD62555S	
					IC201	62119-101-756	IC	SD3624A	
					IC202	62119-103-602	IC	BA7J8	
					Q203	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
					Q206	62137-103-380	TRANSISTOR	KSA 733-Y TAPG	
					Q200	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
					Q201	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
					Q202	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
					D201	62169-406-482	DIODE	1N4148 SAMSUNG	
					D202	62169-406-482	DIODE	1N4148 SAMSUNG	

*S.N.A: Service Not Available.

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
D203	62169-406-482	DIODE	1N4148 SAMSUNG		D603	62169-406-482	DIODE	1N4148 SAMSUNG	
D204	62169-406-482	DIODE	1N4148 SAMSUNG		D604	62169-406-482	DIODE	1N4148 SAMSUNG	
	63005-006-176	PWB-MAIN(A)	94VO 1.6x247x295 PAL7		D605	62169-406-482	DIODE	1N4148 SAMSUNG	
	63124-103-330	PINTEST POINT	BSW 1/4H P11.0 SN			63054-222-180	WIRE-JUMPER (H-WRAP)	1007 #26-SOLD WHT 180	
CN203	63349-062-370	CONNECTOR WAFER	5267-08A		CN601	63349-062-410	CONNECTOR WAFER	5267-12A	
	66462-602-110	CONNECTOR BOARD	ABS 94VO (VX-710)		XT601	64539-102-012	CERAMIC RESONATOR	FCR 4.0MC	
SYSCON-PART; PAL(G-7)-A					TUNER-PART; PAL (G-7)-A				
R607	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R433	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R608	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R434	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R622	61048-177-102	R-METAL FILM	RM1/8TS 1K-J		R408	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R605	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		R412	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R606	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		R437	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R613	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		R448	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R614	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		R450	61048-177-102	R-METAL FILM	RM1/8TS 1K-J	
R634	61048-177-103	R-METAL FILM	RM1/8TS 10K-J		R418	61048-177-102	R-METAL FILM	RM1/8TS 1K-J	
R631	61048-177-123	R-METAL FILM	RM1/8TS 12K-J		R427	61048-177-102	R-METAL FILM	RM1/8TS 1K-J	
R627	61048-177-154	R-METAL FILM	RM1/8TS 150K-J		R444	61048-177-102	R-METAL FILM	RM1/8TS 1K-J	
R636	61048-177-221	R-METAL FILM	RM1/8TS 220-J		R440	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
R632	61048-177-273	R-METAL FILM	RM1/8TS 27K-J		R441	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
R633	61048-177-273	R-METAL FILM	RM1/8TS 27K-J		R445	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
R616	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R422	61048-177-104	R-METAL FILM	RM1/8TS 100K-J	
R617	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R446	61048-177-122	R-METAL FILM	RM1/8TS 1.2K-J	
R618	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R413	61048-177-122	R-METAL FILM	RM1/8TS 1.2K-J	
R619	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R428	61048-177-123	R-METAL FILM	RM1/8TS 12K-J	
R620	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R402	61048-177-221	R-METAL FILM	RM1/8TS 220-J	
R621	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R449	61048-177-272	R-METAL FILM	RM1/8TS 2.7K-J	
R623	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R421	61048-177-183	R-METAL FILM	RM1/8TS 18K-J	
R635	61048-177-333	R-METAL FILM	RM1/8TS 33K-J		R403	61048-177-202	R-METAL FILM	RM1/8TS 2K-J	
R611	61048-177-334	R-METAL FILM	RM1/8TS 330K-J		R442	61048-177-220	R-METAL FILM	RM1/8TS 22-J	
R601	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R417	61048-177-221	R-METAL FILM	RM1/8TS 220-J	
R602	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R451	61048-177-152	R-METAL FILM	RM1/8TS 1.5K-J	
R603	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R414	61048-177-270	R-METAL FILM	RM1/8TS 27-J	
R604	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R409	61048-177-331	R-METAL FILM	RM1/8TS 330-J	
R610	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R415	61048-177-332	R-METAL FILM	RM1/8TS 3.3K-J	
R624	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R429	61048-177-333	R-METAL FILM	RM1/8TS 33K-J	
R625	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R416	61048-177-393	R-METAL FILM	RM1/8TS 39K-J	
R626	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R423	61048-177-393	R-METAL FILM	RM1/8TS 39K-J	
R629	61048-177-472	R-METAL FILM	RM1/8TS 4.7K-J		R420	61048-177-510	R-METAL FILM	RM1/8TS 51-J	
R609	61048-177-473	R-METAL FILM	RM1/8TS 47K-J		R406	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
R637	61048-177-473	R-METAL FILM	RM1/8TS 47K-J		R425	61048-177-512	R-METAL FILM	RM1/8TS 5.1K-J	
R638	61048-177-562	R-METAL FILM	RM1/8TS 5.6K-J		R443	61048-177-101	R-METAL FILM	RM1/8TS 100-J	
R639	61048-177-562	R-METAL FILM	RM1/8TS 5.6K-J		R432	61048-177-561	R-METAL FILM	RM1/8TS 560-J	
R628	61048-177-823	R-METAL FILM	RM1/8TS 82K-J		R407	61048-177-680	R-METAL FILM	RM1/8TS 68-J	
R615	61048-277-330	R-METAL FILM	RM1/4T 33-J		R411	61048-177-681	R-METAL FILM	RM1/8TS 680-J	
C607	61417-109-040	C-CERAMIC. HK	CK45F TAPG 50V 0.001M		R410	61048-177-562	R-METAL FILM	RM1/8TS 5.6K-J	
C602	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		R424	61048-177-683	R-METAL FILM	RM1/8TS 68K-J	
C603	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		R430	61048-177-683	R-METAL FILM	RM1/8TS 68K-J	
C608	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		R405	61048-177-750	R-METAL FILM	RM1/8TS 75-J	
C609	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		R435	61048-177-750	R-METAL FILM	RM1/8TS 75-J	
C610	61417-109-140	C-CERAMIC. HK	CK45F TAPG 50V 0.01M-Z		R431	61048-177-911	R-METAL FILM	RM1/8TS 910-J	
C611	61417-109-200	C-CERAMIC. HK	CK45F TAPG 50V 0.047M-Z		R436	61048-327-680	R-METAL OXIDE	RS 2P 68-J	
C604	61417-109-210	C-CERAMIC. HK	CK45F TAPG 50V 0.1M-Z		VR401	61246-105-103	VR-SEMI	RH0615C 10KB	
C606	61417-109-210	C-CERAMIC. HK	CK45F TAPG 50V 0.1M-Z		C418	61407-101-121	C-CERAMIC TEMP	CC45SL TAPG 50V 10-D	
C612	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M		C405	61407-101-200	C-CERAMIC TEMP	CC45SL TAPG 50V 22-J	
C601	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M		C408	61407-101-230	C-CERAMIC TEMP	CC45SL TAPG 50V 27-J	
C614	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M		C435	61407-101-230	C-CERAMIC TEMP	CC45SL TAPG 50V 27-J	
C613	61609-401-472	C-ELECTROLYTIC	CE04W 10V 4700M		C404	61407-105-250	C-CERAMIC TEMP	CC45SL TAPG 50V 39-J	
IC602	62119-101-025	IC	CXK1005P		C425	61407-105-640	C-CERAMIC TEMP	CC45CH TAPG 50V 2-C	
IC601	62119-103-117	IC	μPD 75104 CW-087		C403	61407-105-230	C-CERAMIC TEMP	CC45SL TAPG 50V 27-J	
IC601	62119-103-118	IC	μPD 75P108 CW		C411	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z	
IC603	62119-401-281	IC	KA-2103LN		C414	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z	
Q603	62137-301-900	TRANSISTOR	KSR 838-Y TAPG		C418	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z	
Q601	62137-701-010	TRANSISTOR	KSR 1001 TAPG		C412	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z	
Q602	62137-701-013	TRANSISTOR	KSR 1004 TAPG		C434	61417-109-210	C-CERAMIC HK	CK45F TAPG 50V 0.1M-Z	
D601	62169-406-482	DIODE	1N4148 SAMSUNG						
D602	62169-406-482	DIODE	1N4148 SAMSUNG						

*S.N.A.: Service Not Available.

LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
C423	61507-121-450	C-POLYESTER	CQ921M TAPG 50V 0.0068M-K		R128	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C401	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R131	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C406	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R132	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C407	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R129	61048-177-152	R-METAL FILM	RM1/8TS 1.5K-J	
C424	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R124	61048-277-271	R-METAL FILM	RM1/4TS 270-J	
C422	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R125	61048-277-271	R-METAL FILM	RM1/4TS 270-J	
C432	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		C124	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C410	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M		C123	61609-401-480	C-ELECTROLYTIC	CE04W 16V 220M	
C433	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M		C129	61607-401-479	C-ELECTROLYTIC	CE04W 16V 47M	
C413	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M		C121	61609-152-331	C-ELECTROLYTIC	CE04W 25V 330M	
C421	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M		C122	61609-152-331	C-ELECTROLYTIC	CE04W 25V 330M	
C410	61607-401-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M		Q106	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C417	61607-402-421	C-ELECTROLYTIC	CE04W TAPG 25V 0.22M		Q111	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C426	61609-401-500	C-ELECTROLYTIC	CE04W 16V 470M		Q113	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C402	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q114	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C409	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q110	62149-101-500	TRANSISTOR	KTA966Y	
C419	61419-109-220	C-CERAMIC HK	CK45F 50V 0.022M-Z		Q112	62149-101-500	TRANSISTOR	KTA966Y	
C420	61419-109-220	C-CERAMIC HK	CK45F 50V 0.022M-Z		Q105	62149-202-060	TRANSISTOR	KSB772	
C427	61419-109-200	C-CERAMIC HK	CK45F 50V 0.047M-Z		Q109	62149-301-750	TRANSISTOR	KTC2236Y	
C430	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q107	62149-301-750	TRANSISTOR	KTC2236Y	
C415	61609-401-500	C-ELECTROLYTIC	CE04W 16V 470M		ZD105	62169-403-390	DIODE-ZENER	RD9.1 EB2	
IC401	62119-101-745	IC	TA8611N		ZD104	62169-403-761	DIODE-ZENER	RD12EB2	
IC403	62119-101-748	IC	TA7348P		D109	62169-406-482	DIODE	1N4148 SAMSUNG	
IC404	62119-101-748	IC	TA7348P		D110	62169-406-482	DIODE	1N4148 SAMSUNG	
IC402	62119-501-560	IC-L	KA33V		D112	62169-406-482	DIODE	1N4148 SAMSUNG	
Q402	62137-103-380	TRANSISTOR	KSA 733-Y TAPG		L105	62427-812-330	COIL-PEAKING	EL0606RA-330K (33UH) TAPG	
Q408	62137-301-900	TRANSISTOR	KSC 838-Y TAPG						
Q403	62137-302-740	TRANSISTOR	KSC 945-Y TAPG						
Q405	62137-701-013	TRANSISTOR	KSR 1004 TAPG						
Q407	62137-701-013	TRANSISTOR	KSR 1004 TAPG						
Q406	62139-301-090	TRANSISTOR	KTC 388ATM						
Q404	62147-101-950	TRANSISTOR	KSA 643-Y TAPG						
D401	62169-406-482	DIODE	1N4148 SAMSUNG						
L401	62427-812-829	COIL-PEAKING	EL0606RA-8.2uH						
L406	62427-812-220	COIL-PEAKING	EL0606RA-220J (22UH) TAPG						
L404	62427-812-229	COIL-PEAKING	EL0606RA-2R2K (2.2UH) TAPG						
L402	62427-812-270	COIL-PEAKING	EL0606RA-270J (27UH) TAPG						
L407	62427-814-100	COIL-PEAKING	BAL03 TAPG 100K						
L403	62429-811-010	COIL-PEAKING	DAESIN 10Hz R55K						
FL408	62429-832-010	COILTRAP	DAS 32.4MHz (G-7)						
FL407	62429-832-020	COILTRAP	DAISIN 40.4MHz (G-7)						
FL410	62429-832-080	COIL VARIABLE	1.2UH PSF MATCH						
FL405	62719-049-012	TRANS-RESONANT (T1)	40MHz V-DET						
FL404	62719-049-013	TRANS-AFT (T2)	40MHz AFT-BAL						
FL403	62719-049-014	TRANS-COIL (T3)	5.5M TUNING-COIL 5.5M						
	63054-401-670	CABLE-COAXIAL ASS'Y	UL B65 AWG 30 BLK 100						
	63124-103-330	PIN-TEST POINT	BSW 1/4H P11.0 SN						
	63344-010-050	HOLDER JACK	G-7W						
	64519-902-026	TUNER	ECC-2885 PLE G-7 CABLE						
FL406	64529-310-012	CERAMIC-FILTER	SFE-5.5MB						
FL301	64529-401-183	FILTER-LC	SLC-2140A						
FL402	64529-418-041	SAW FILTER	TSF-1303						
FL401	64529-421-021	CERAMIC-TRAP	TPS-5.5MB						
	64543-603-110	SHIELD CASE BODY	SPTE T0.25 (G-7W PAL)						
	64543-603-410	SHIELD CASE TOP	SPTE T0.25 (G-7W PAL)						
	64544-610-610	SHIELD CASE BOT	SPTE T0.25 (G-7W PAL)						
L405	62427-814-101	COIL-PEAKING AXIAL	BAL03 TAPG 101K						
	62569-002-107	PAL G RF MODULATOR	RUS-2161AL						
FL409	64529-421-020	CERAMIC-TRAP	TPS-6.0MB						
POWER-PART: PAL (G-7)-A									
R123	60509-400-116	WIRE-SQ. COPPER	TA0.6SN						
	61048-177-101	R-METAL FILM	RM1/8TS 100-J						

*S.N.A.: Service Not Available.

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LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
C423	61507-121-450	C-POLYESTER	CQ921M TAPG 50V 0.0068M-K		R128	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C401	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R131	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C406	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R132	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C407	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R129	61048-177-152	R-METAL FILM	RM1/8TS 1.5K-J	
C424	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R124	61048-277-271	R-METAL FILM	RM1/4TS 270-J	
C422	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R125	61048-277-271	R-METAL FILM	RM1/4TS 270-J	
C432	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		C124	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C410	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M		C123	61609-401-480	C-ELECTROLYTIC	CE04W 16V 220M	
C433	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M		C129	61607-401-479	C-ELECTROLYTIC	CE04W 16V 47M	
C413	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M		C121	61609-152-331	C-ELECTROLYTIC	CE04W 25V 330M	
C421	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M		C122	61609-152-331	C-ELECTROLYTIC	CE04W 25V 330M	
C410	61607-401-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M		Q106	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C417	61607-402-421	C-ELECTROLYTIC	CE04W TAPG 25V 0.22M		Q111	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C426	61609-401-500	C-ELECTROLYTIC	CE04W 16V 470M		Q113	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C402	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q114	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C409	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q110	62149-101-500	TRANSISTOR	KTA966Y	
C419	61419-109-220	C-CERAMIC HK	CK45F 50V 0.022M-Z		Q112	62149-101-500	TRANSISTOR	KTA966Y	
C420	61419-109-220	C-CERAMIC HK	CK45F 50V 0.022M-Z		Q105	62149-202-060	TRANSISTOR	KSB772	
C427	61419-109-200	C-CERAMIC HK	CK45F 50V 0.047M-Z		Q109	62149-301-750	TRANSISTOR	KTC2236Y	
C430	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q107	62149-301-750	TRANSISTOR	KTC2236Y	
C415	61609-401-500	C-ELECTROLYTIC	CE04W 16V 470M		ZD105	62169-403-390	DIODE-ZENER	RD9.1 EB2	
IC401	62119-101-745	IC	TA8611N		ZD104	62169-403-761	DIODE-ZENER	RD12EB2	
IC403	62119-101-748	IC	TA7348P		D109	62169-406-482	DIODE	1N4148 SAMSUNG	
IC404	62119-101-748	IC	TA7348P		D110	62169-406-482	DIODE	1N4148 SAMSUNG	
IC402	62119-501-560	IC-L	KA33V		D112	62169-406-482	DIODE	1N4148 SAMSUNG	
Q402	62137-103-380	TRANSISTOR	KSA 733-Y TAPG		L105	62427-812-330	COIL-PEAKING	EL0607RA-330K (33UH) TAPG	
Q408	62137-301-900	TRANSISTOR	KSC 838-Y TAPG						
Q403	62137-302-740	TRANSISTOR	KSC 945-Y TAPG		6900-270-101 ASSY-PRE AMP D7-PRI				
Q405	62137-701-013	TRANSISTOR	KSR 1004 TAPG		R0388	61048-177-101	R-METAL FILM	RM 1/8TS 100-J	
Q407	62137-701-013	TRANSISTOR	KSR 1004 TAPG		R0391	61048-177-102	R-METAL FILM	RM 1/8TS 1K-J	
Q406	62139-301-090	TRANSISTOR	KTC 388ATM		R0395	61048-177-103	R-METAL FILM	RM 1/8TS 10K-J	
Q404	62147-101-950	TRANSISTOR	KSA 643-Y TAPG		R0389	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
D401	62169-406-482	DIODE	1N4148 SAMSUNG		R0390	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
L401	62427-812-829	COIL-PEAKING	EL0606RA-8.2uH		R0392	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
L406	62427-812-220	COIL-PEAKING	EL0606RA-220J (22UH) TAPG		R0396	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
L404	62427-812-229	COIL-PEAKING	EL0606RA-2R2K (2.2UH) TAPG		R0393	61048-177-152	R-METAL FILM	RM 1/8TS 1.5K-J	
L402	62427-812-270	COIL-PEAKING	EL0606RA-270J (27UH) TAPG		R0394	61048-177-152	R-METAL FILM	RM 1/8TS 1.5K-J	
L407	62427-814-100	COIL-PEAKING	BAL03 TAPG 100K		C3107	61407-105-300	C-CERAMIC TEMP	CC45 CH TAPG 50V 68-J	
L403	62429-811-010	COIL-PEAKING	DAESIN 10Hz R55K		C3109	61407-105-320	C-CERAMIC TEMP	CC45 CH TAPG 50V 82-J	
FL408	62429-832-010	COIL-TRAP	DAS 32.4MHz (G-7)		C3110	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL407	62429-832-020	COIL-TRAP	DAISIN 40.4MHz (G-7)		C3106	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL410	62429-832-080	COIL VARIABLE	1.2UH PSF MATCH		C3108	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL405	62719-049-012	TRANS-RESONANT (TI)	40MHz V-DET		C3115	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL404	62719-049-013	TRANS-AFT (T2)	40MHz AFT-BAL		C3117	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL403	62719-049-014	TRANS-COIL (T3)	5.5M TUNING-COIL 5.5M		C3113	61507-121-511	C-POLYESTER	CQ921M TAPG 100V 0.022M-J	
	63054-401-670	CABLE-COAXIAL ASS'Y	UL B65 AWG 30 BLK 100		C3114	61507-121-511	C-POLYESTER	CQ921M TAPG 100V 0.022M-J	
	63124-103-330	PIN-TEST POINT	BSW 1/4H P11.0 SN		C3116	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M	
	63344-010-050	HOLDER JACK	G-7W		C3118	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
	64519-902-026	TUNER	ECC-2885 PLE G-7 CABLE		C3111	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
FL406	64529-310-012	CERAMIC-FILTER	SFE-5.5MB		R3112	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
FL301	64529-401-183	FILTER-LC	SLC-2140A		IC0307	62119-101-730	IC	TA7772P	
FL402	64529-418-041	SAW FILTER	TSF-1303		D0305	62169-406-482	DIODE	1N4148 SAMSUNG	
FL401	64529-421-021	CERAMIC-TRAP	TPS-5.5MB		D0306	62169-406-482	DIODE	1N4148 SAMSUNG	
	64543-603-110	SHIELD CASE BODY	SPTE T0.25 (G-7W PAL)		L3001	62427-812-399	COIL-PEAKING	EL0606RA-3R9K (3.9UH) TAPG	
	64543-603-410	SHIELD CASE TOP	SPTE T0.25 (G-7W PAL)			63005-004-136	PWB-PRE AMP	VX-710 1.6TX110.5X130	
	64544-610-610	SHIELD CASE BOT	SPTE T0.25 (G-7W PAL)			63124-103-330	PIN-TEST POINT	BSW 1/4H P11.0 SN	
L405	62427-814-101	COIL-PEAKING AXIAL	BAL03 TAPG 101K		CN306	63349-601-060	CONNECTOR WAFER	5234-07A	
	62569-002-107	PAL G RF MODULATOR	RUS-2161AL			63379-600-034	PC BOARD CONNECTOR	3024-04 AHPB	
FL409	64529-421-020	CERAMIC-TRAP	TPS-6.0MB			64544-610-810	CASE-BOTTOM PREAMP	SPTE 0.3T	
POWER-PART: PAL (G-7)-A						64544-610-910	CASE-TOP PREAMP	SPTE 0.3T	
						69000-270-114	4C HEAD ASSY	D7-PRI	
						63053-607-670	LEAD CONNECTOR ASSY	1429/1061 #26 WHT 480 CN302	
						63349-710-050	TERMINAL	5263T	
R123	60509-400-118	WIRE-SQ. COPPER	TA0.6SN						
	61048-177-101	R-METAL FILM	RM1/8TS 100-J						

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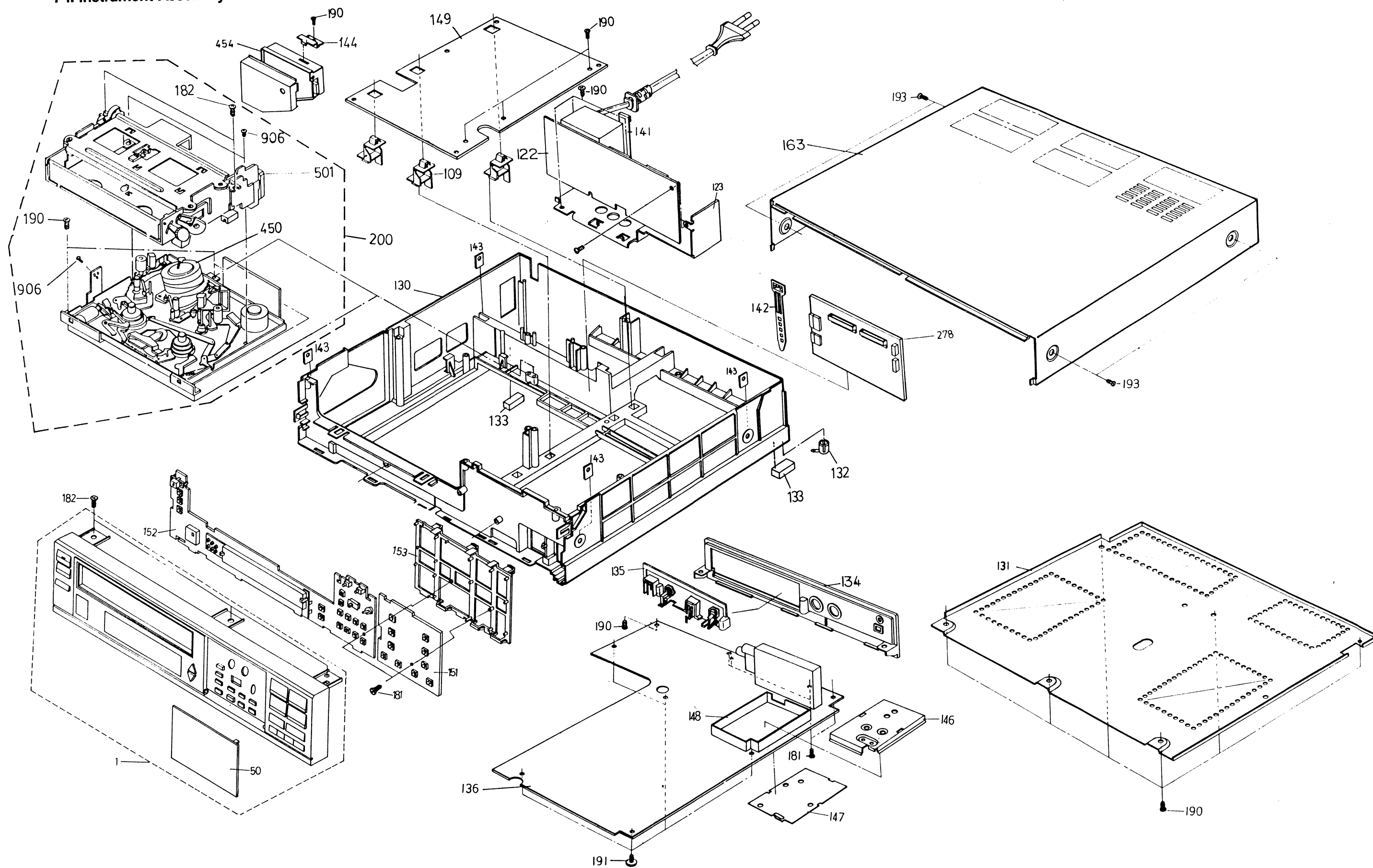
LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS	LOCA NO.	CODE NO.	DESCRIPTION	SPECIFICATION	REMARKS
C423	61507-121-450	C-POLYESTER	CQ921M TAPG 50V 0.0068M-K		R128	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C401	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R131	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C406	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R132	61048-177-103	R-METAL FILM	RM1/8TS 10K-J	
C407	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R129	61048-177-152	R-METAL FILM	RM1/8TS 1.5K-J	
C424	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R124	61048-277-271	R-METAL FILM	RM1/4TS 270-J	
C422	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		R125	61048-277-271	R-METAL FILM	RM1/4TS 270-J	
C432	61607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M		C124	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
C410	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M		C123	61609-401-480	C-ELECTROLYTIC	CE04W 16V 220M	
C433	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M		C129	61607-401-479	C-ELECTROLYTIC	CE04W 16V 47M	
C413	61607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M		C121	61609-152-331	C-ELECTROLYTIC	CE04W 25V 330M	
C421	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M		C122	61609-152-331	C-ELECTROLYTIC	CE04W 25V 330M	
C410	61607-401-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M		Q106	62137-302-740	TRANSISTOR	KSC 945-Y TAPG	
C417	61607-402-421	C-ELECTROLYTIC	CE04W TAPG 25V 0.22M		Q111	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C426	61609-401-500	C-ELECTROLYTIC	CE04W 16V 470M		Q113	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C402	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q114	62137-701-013	TRANSISTOR	KSR 1004 TAPG	
C409	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q110	62149-101-500	TRANSISTOR	KT966Y	
C419	61419-109-220	C-CERAMIC HK	CK45F 50V 0.022M-Z		Q112	62149-101-500	TRANSISTOR	KT966Y	
C420	61419-109-220	C-CERAMIC HK	CK45F 50V 0.022M-Z		Q105	62149-202-060	TRANSISTOR	KSB772	
C427	61419-109-200	C-CERAMIC HK	CK45F 50V 0.047M-Z		Q109	62149-301-750	TRANSISTOR	KTC2236Y	
C430	61417-109-140	C-CERAMIC HK	CK45F TAPG 50V 0.01M-Z		Q107	62149-301-750	TRANSISTOR	KTC2236Y	
C415	61609-401-500	C-ELECTROLYTIC	CE04W 16V 470M		ZD105	62169-403-390	DIODE-ZENER	RD9.1 EB2	
IC401	62119-101-745	IC	TA8611N		ZD104	62169-403-761	DIODE-ZENER	RD12EB2	
IC403	62119-101-748	IC	TA7348P		D109	62169-406-482	DIODE	1N4148 SAMSUNG	
IC404	62119-101-748	IC	TA7348P		D110	62169-406-482	DIODE	1N4148 SAMSUNG	
IC402	62119-501-560	IC-L	KA33V		D112	62169-406-482	DIODE	1N4148 SAMSUNG	
Q402	62137-103-380	TRANSISTOR	KSA 733-Y TAPG		L105	62427-812-330	COIL-PEAKING	EL0607RA-330K (33UH) TAPG	
Q408	62137-301-900	TRANSISTOR	KSC 838-Y TAPG		6900-270-101 ASSY-PRE AMP 07-PRI				
Q403	62137-302-740	TRANSISTOR	KSC 945-Y TAPG		R0388	61048-177-101	R-METAL FILM	RM 1/8TS 100-J	
Q405	62137-701-013	TRANSISTOR	KSR 1004 TAPG		R0391	61048-177-102	R-METAL FILM	RM 1/8TS 1K-J	
Q407	62137-701-013	TRANSISTOR	KSR 1004 TAPG		R0395	61048-177-103	R-METAL FILM	RM 1/8TS 10K-J	
Q406	62139-301-090	TRANSISTOR	KTC 388ATM		R0389	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
Q404	62147-101-950	TRANSISTOR	KSA 643-Y TAPG		R0390	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
D401	62169-406-482	DIODE	1N4148 SAMSUNG		R0392	60148-177-151	R-METAL FILM	RM 1/8TS 150-J	
L401	62427-812-829	COIL-PEAKING	EL0606RA-8.2uH		R0396	61048-177-151	R-METAL FILM	RM 1/8TS 150-J	
L406	62427-812-220	COIL-PEAKING	EL0606RA-220J (22UH) TAPG		R0393	61048-177-152	R-METAL FILM	RM 1/8TS 1.5K-J	
L404	62427-812-229	COIL-PEAKING	EL0606RA-2R2K (2.2UH) TAPG		R0394	61048-177-152	R-METAL FILM	RM 1/8TS 1.5K-J	
L402	62427-812-270	COIL-PEAKING	EL0606RA-270J (27UH) TAPG		C3107	61407-105-300	C-CERAMIC TEMP	CC45 CH TAPG 50V 68-J	
L407	62427-814-100	COIL-PEAKING	BAL03 TAPG 100K		C3109	61407-105-320	C-CERAMIC TEMP	CC45 CH TAPG 50V 82-J	
L403	62429-811-010	COIL-PEAKING	DAESIN 10Hz R55K		C3110	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL408	62429-832-010	COIL-TRAP	DAS 32.4MHz (G-7)		C3106	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL407	62429-832-020	COIL-TRAP	DAISIN 40.4MHz (G-7)		C3108	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL410	62429-832-080	COIL VARIABLE	1.2UH PSF MATCH		C3115	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL405	62719-049-012	TRANS-RESONANT (TI)	40MHz V-DET		C3117	61417-109-140	C-CERAMIC HK	CK45 F TAPG 50V 0.01M-Z	
FL404	62719-049-013	TRANS-AFT (T2)	40MHz AFT-BAL		C3113	61507-121-511	C-POLYESTER	CQ921M TAPG 100V 0.022M-J	
FL403	62719-049-014	TRANS-COIL (T3)	5.5M TUNING-COIL 5.5M		C3114	61507-121-511	C-POLYESTER	CQ921M TAPG 100V 0.022M-J	
	63054-401-670	CABLE-COAXIAL ASS'Y	UL B65 AWG 30 BLK 100		C3116	61607-401-440	C-ELECTROLYTIC	CE04W TAPG 16V 22M	
	63124-103-330	PIN-TEST POINT	BSW 1/4H P11.0 SN		C3118	61607-401-460	C-ELECTROLYTIC (SG)	CE04W TAPG 16V 47M	
	63344-010-050	HOLDER JACK	G-7W		C3111	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
	64519-902-026	TUNER	ECC-2885 PLE G-7 CABLE		R3112	61607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
FL406	64529-310-012	CERAMIC-FILTER	SFE-5.5MB		IC0307	62119-101-730	IC	TA7772P	
FL301	64529-401-183	FILTER-LC	SLC-2140A		D0305	62169-406-482	DIODE	1N4148 SAMSUNG	
FL402	64529-418-041	SAW FILTER	TSF-1303		D0306	62169-406-482	DIODE	1N4148 SAMSUNG	
FL401	64529-421-021	CERAMIC-TRAP	TPS-5.5MB		L3001	62427-812-399	COIL-PEAKING	EL0606RA-3R9K (3.9UH) TAPG	
	64543-603-110	SHIELD CASE BODY	SPTE T0.25 (G-7W PAL)			63005-004-136	PWB-PRE AMP	VX-710 1.6TX110.5X130	
	64543-603-410	SHIELD CASE TOP	SPTE T0.25 (G-7W PAL)			63124-103-330	PIN-TEST POINT	BSW 1/4H P11.0 SN	
	64544-610-610	SHIELD CASE BOT	SPTE T0.25 (G-7W PAL)			63349-601-060	CONNECTOR WAFER	5234-07A	
L405	62427-814-101	COIL-PEAKING AXIAL	BAL03 TAPG 101K			63379-600-034	PC BOARD CONNECTOR	3024-04 AHPB	
FL409	62569-002-107	PAL G RF MODULATOR	RUS-2161AL			64544-610-810	CASE-BOTTOM PREAMP	SPTE 0.3T	
	64529-421-020	CERAMIC-TRAP	TPS-6.0MB			64544-610-910	CASE-TOP PREAMP	SPTE 0.3T	
POWER-PART: PAL (G-7)-A						69000-270-114	AC HEAD ASSY	D7-PRI	
						63053-607-670	LEAD CONNECTOR ASSY	1429/1061 #26 WHT 480 CN302	
						63349-710-050	TERMINAL	5263T	
R123	60508-400-116	WIRE-SQ. COPPER	TA0.6SN						
	61048-177-101	R-METAL FILM	RM1/8TS 100-J						

*S.N.A.: Service Not Available.

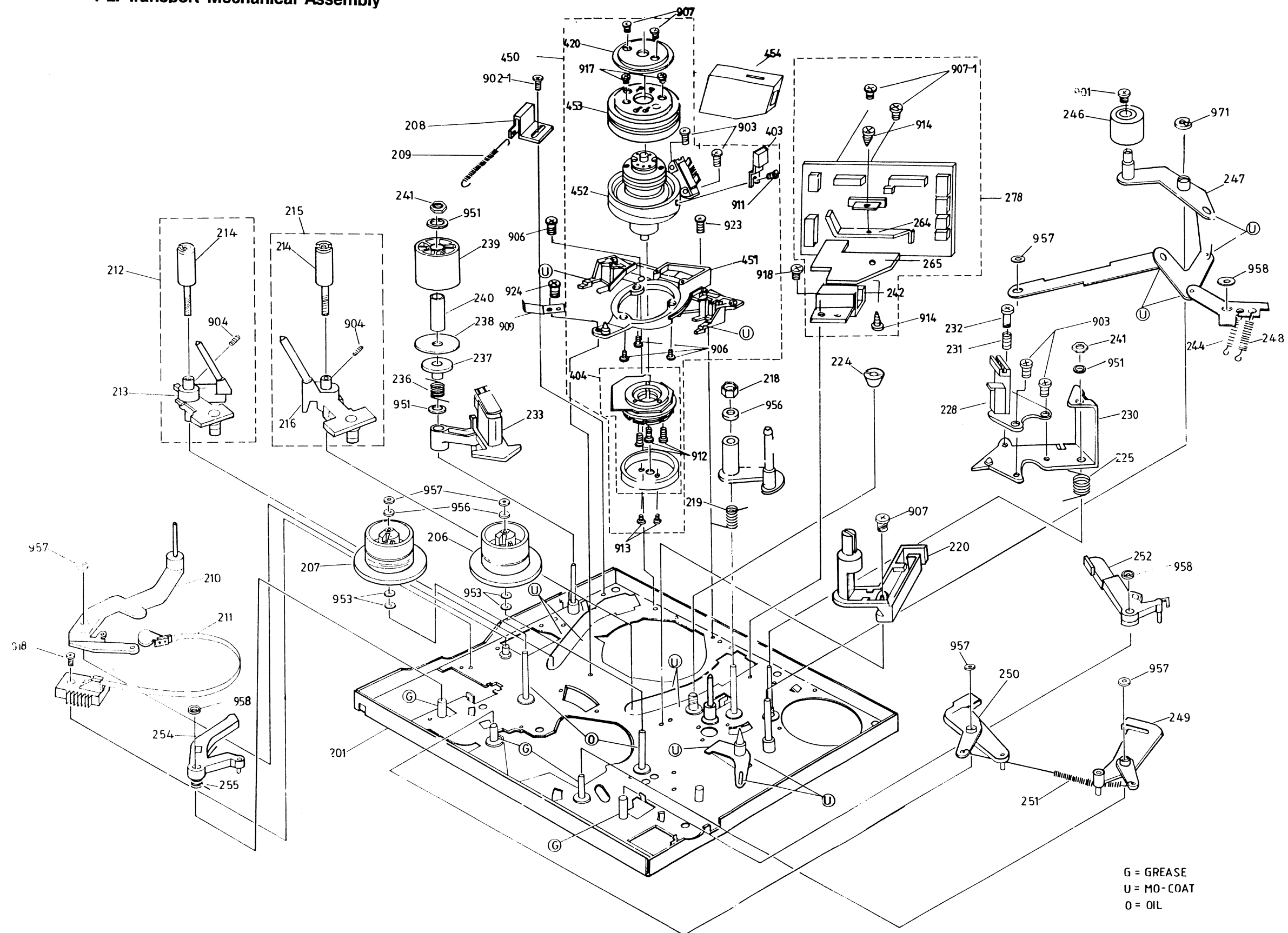
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7-3. Bottom Side Mechanical Assembly	7-4
7-4. Housing Assembly	7-5

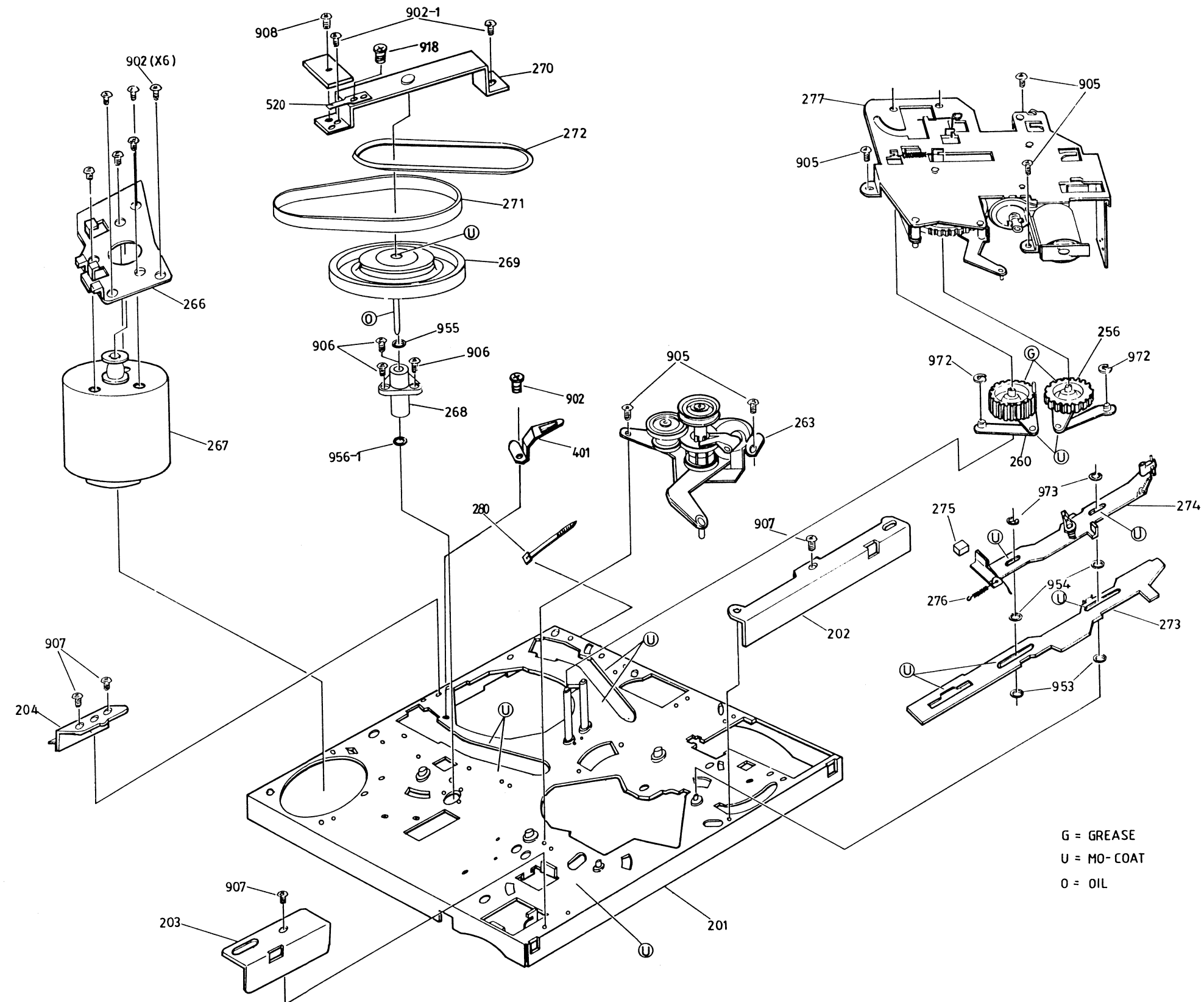
7-1. Instrument Assembly



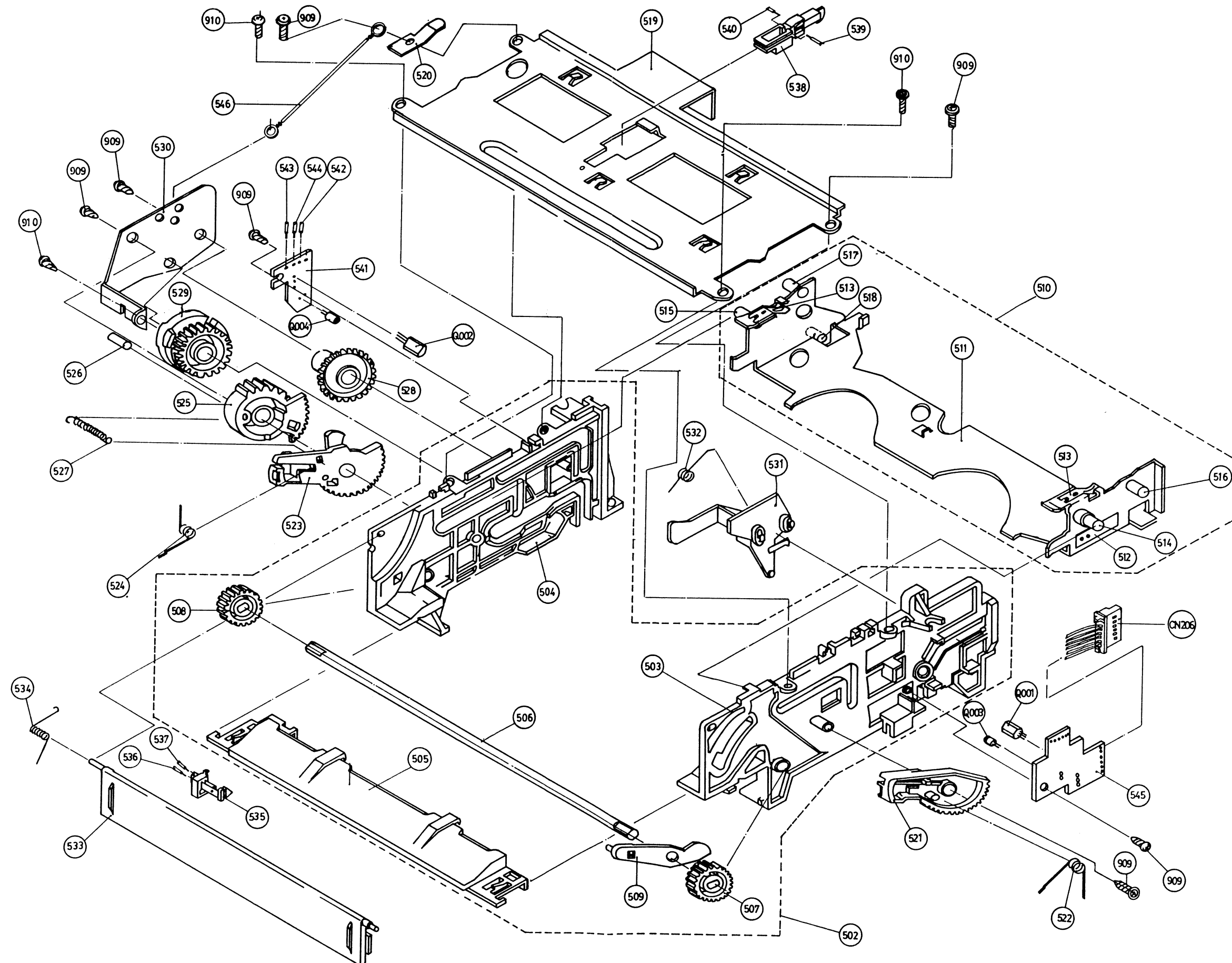
7-2. Transport Mechanical Assembly



7-3. Bottom Side Mechanical Assembly



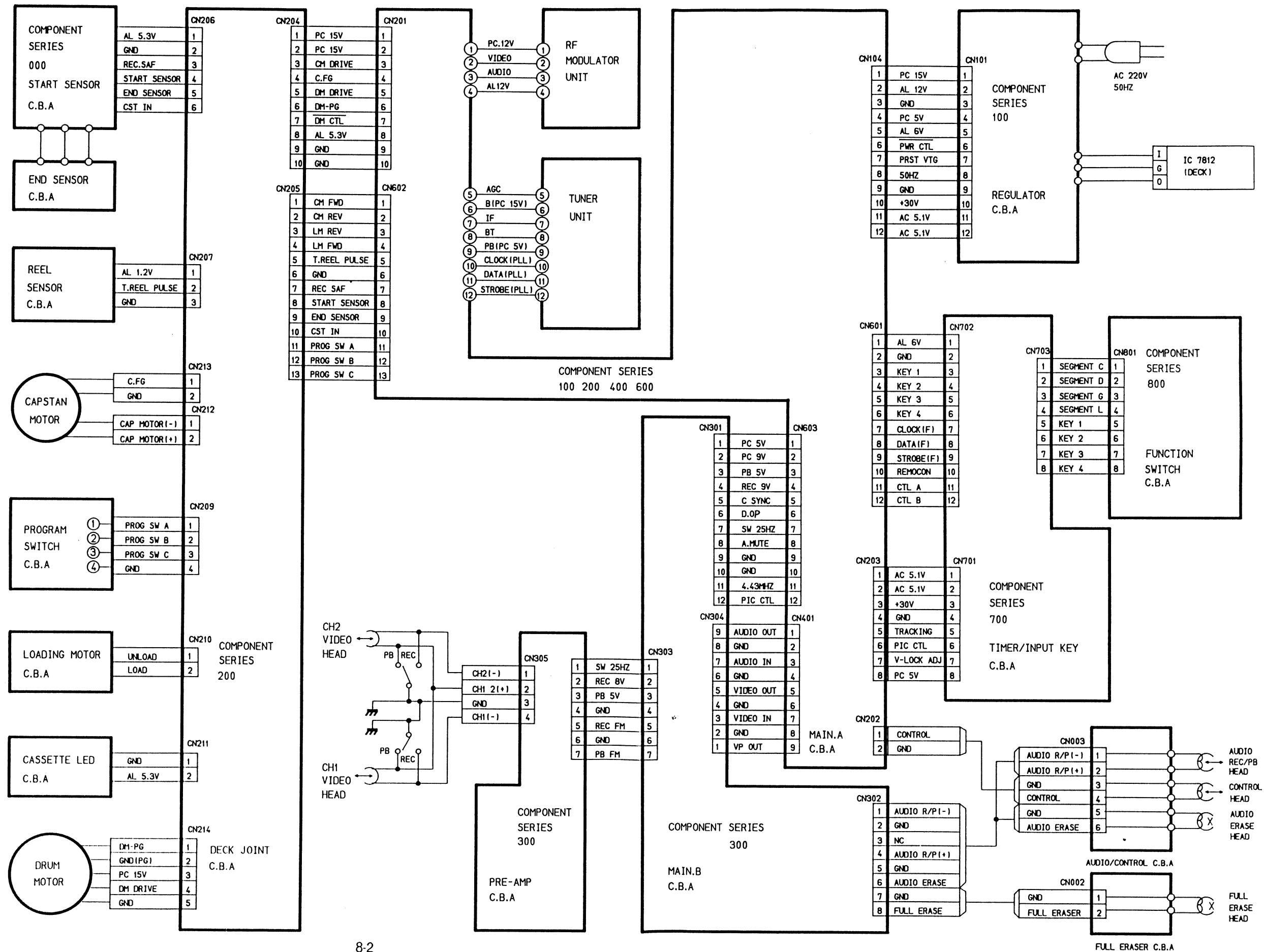
7-4. Housing Assembly



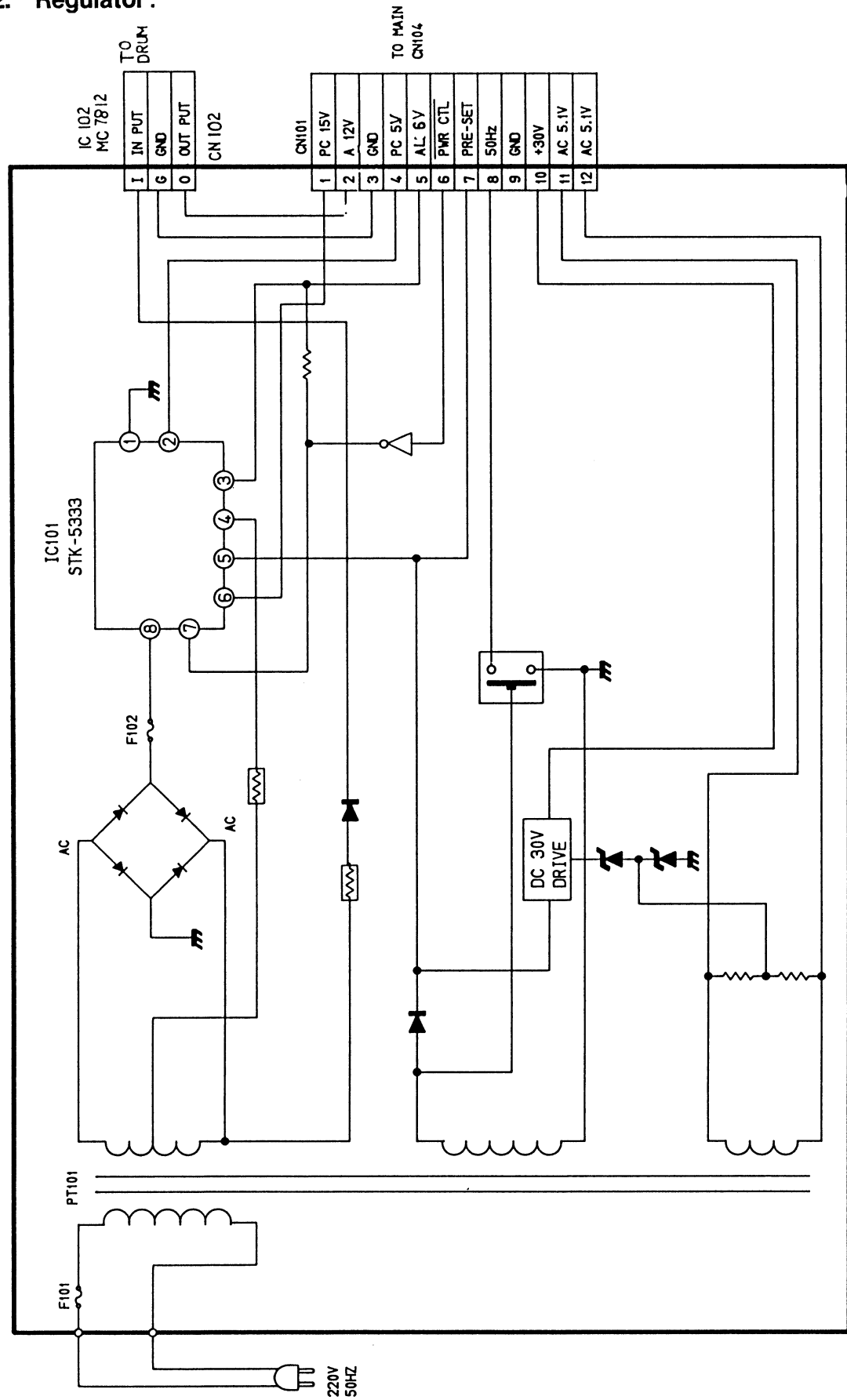
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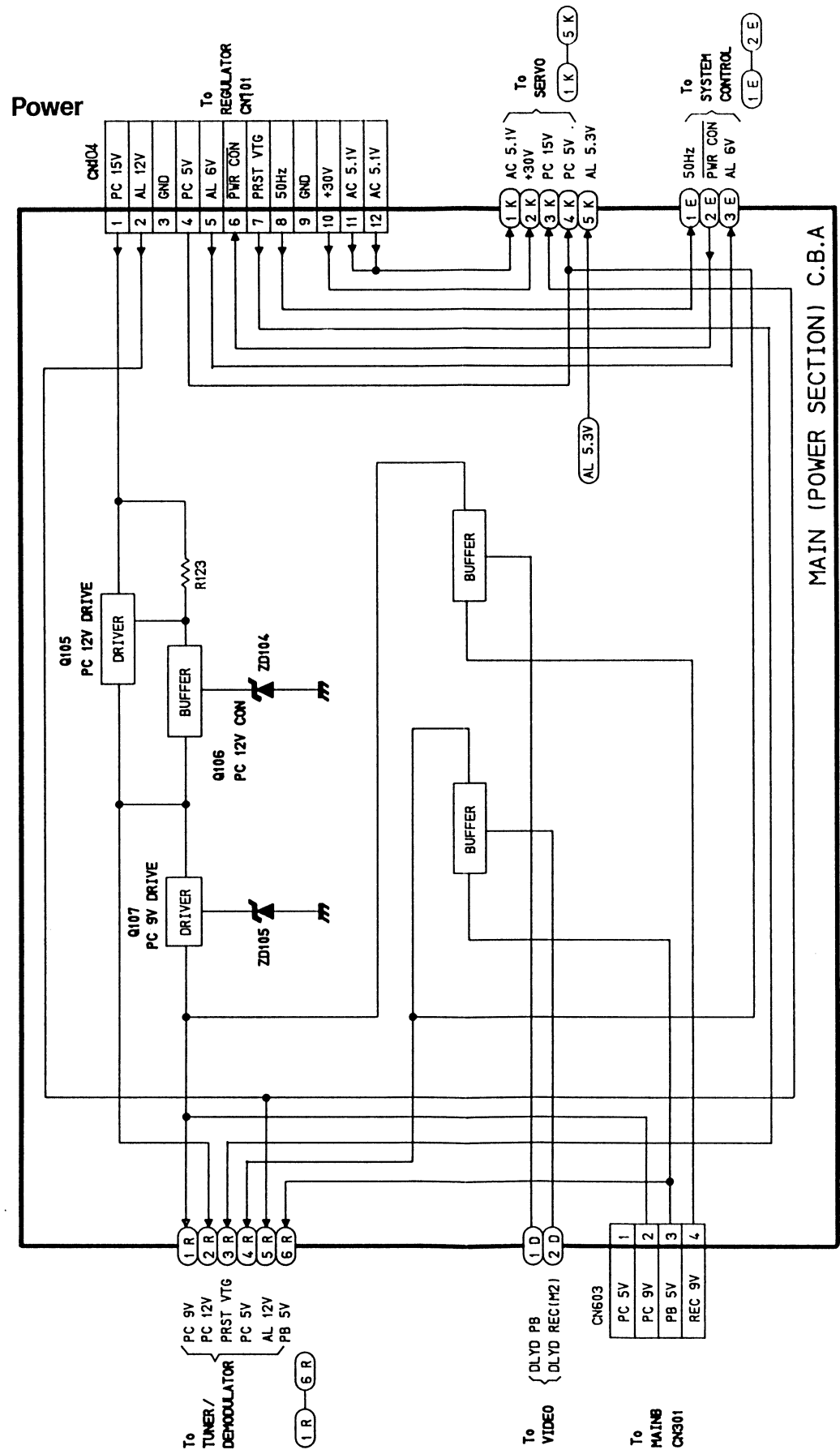
8-1. Total Wiring Diagram



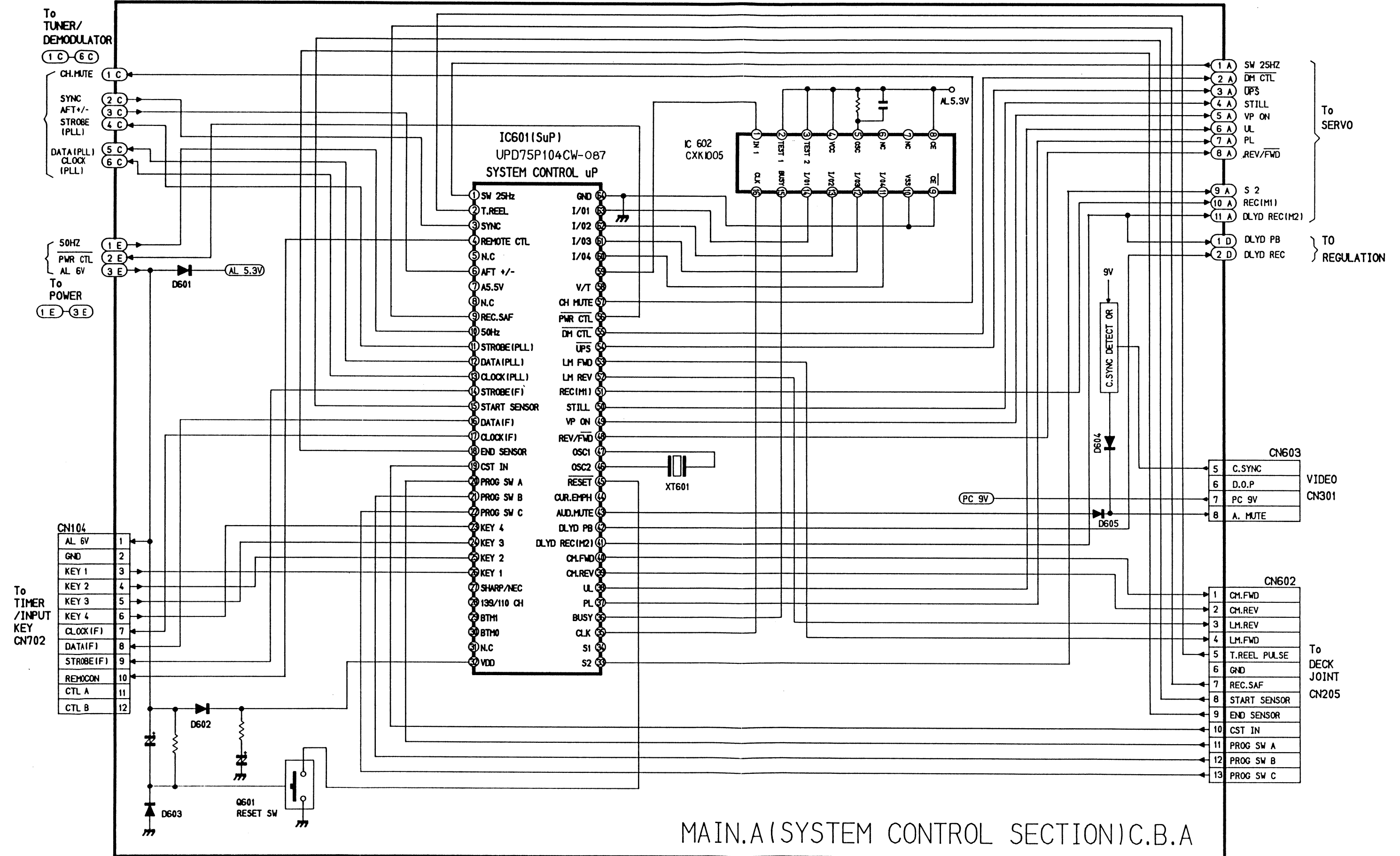
8-2. Regulator .



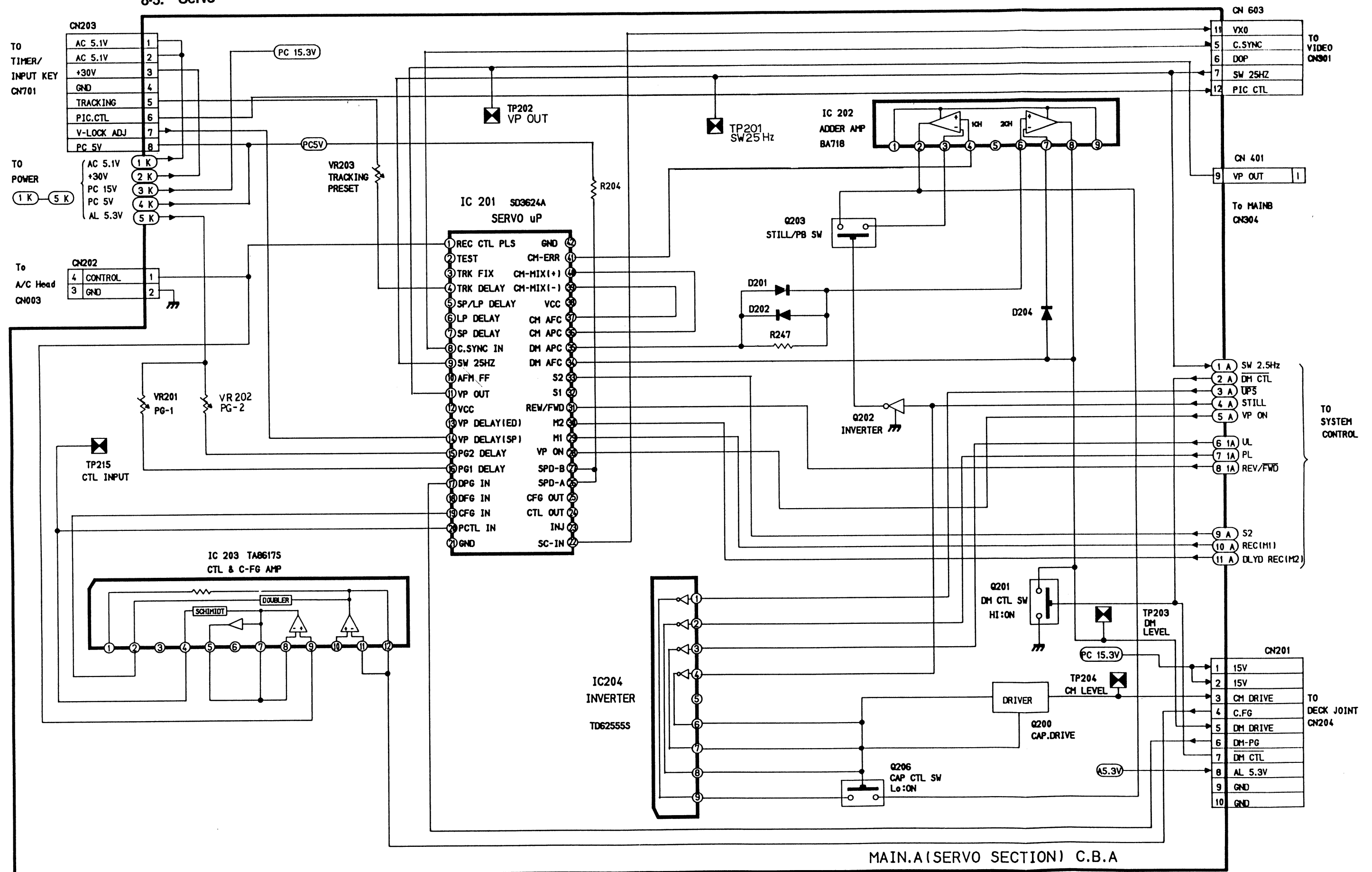
8-3. Power



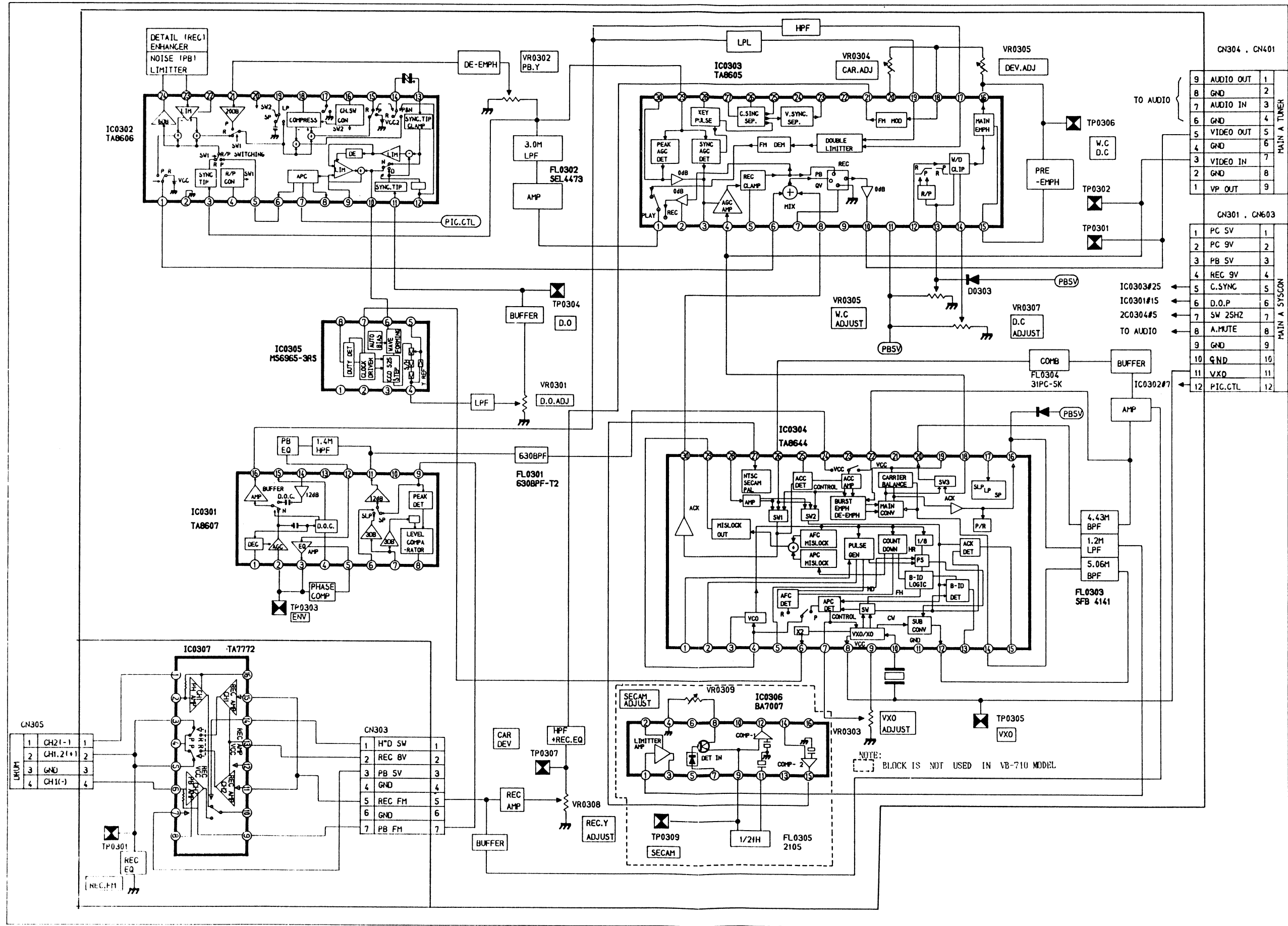
8-4. System Control



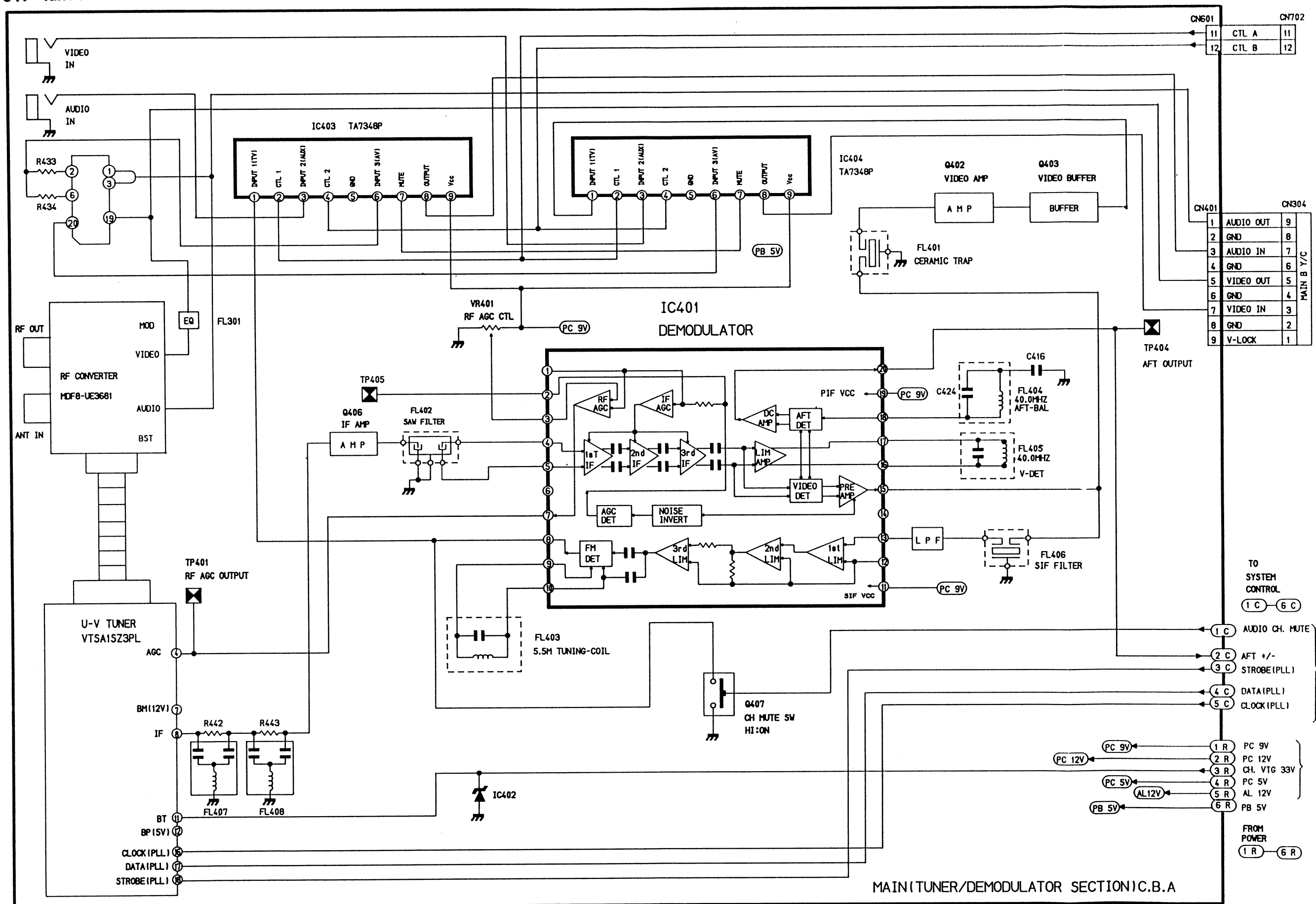
8-5. Servo



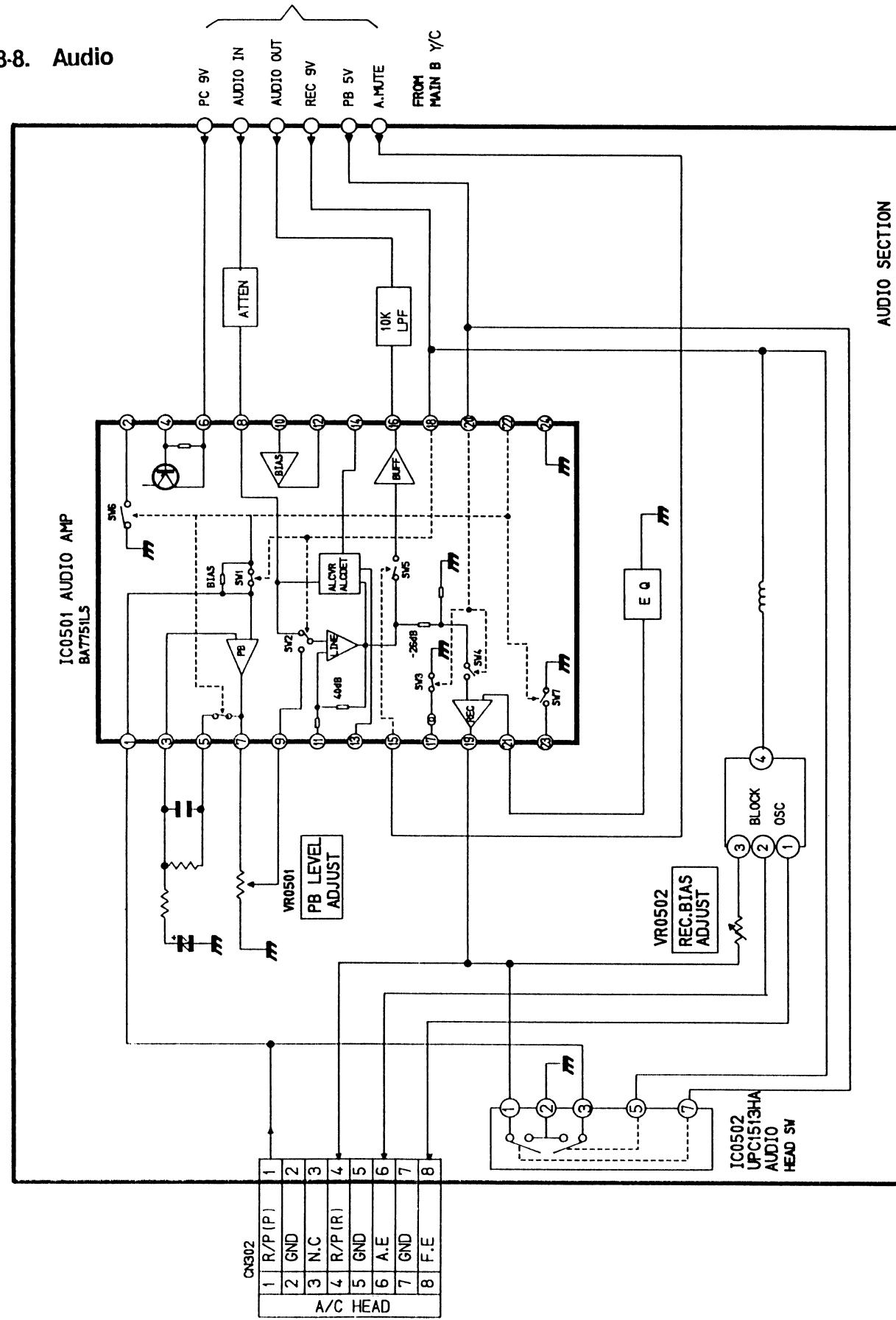
8-6 Luminance/Chrominance

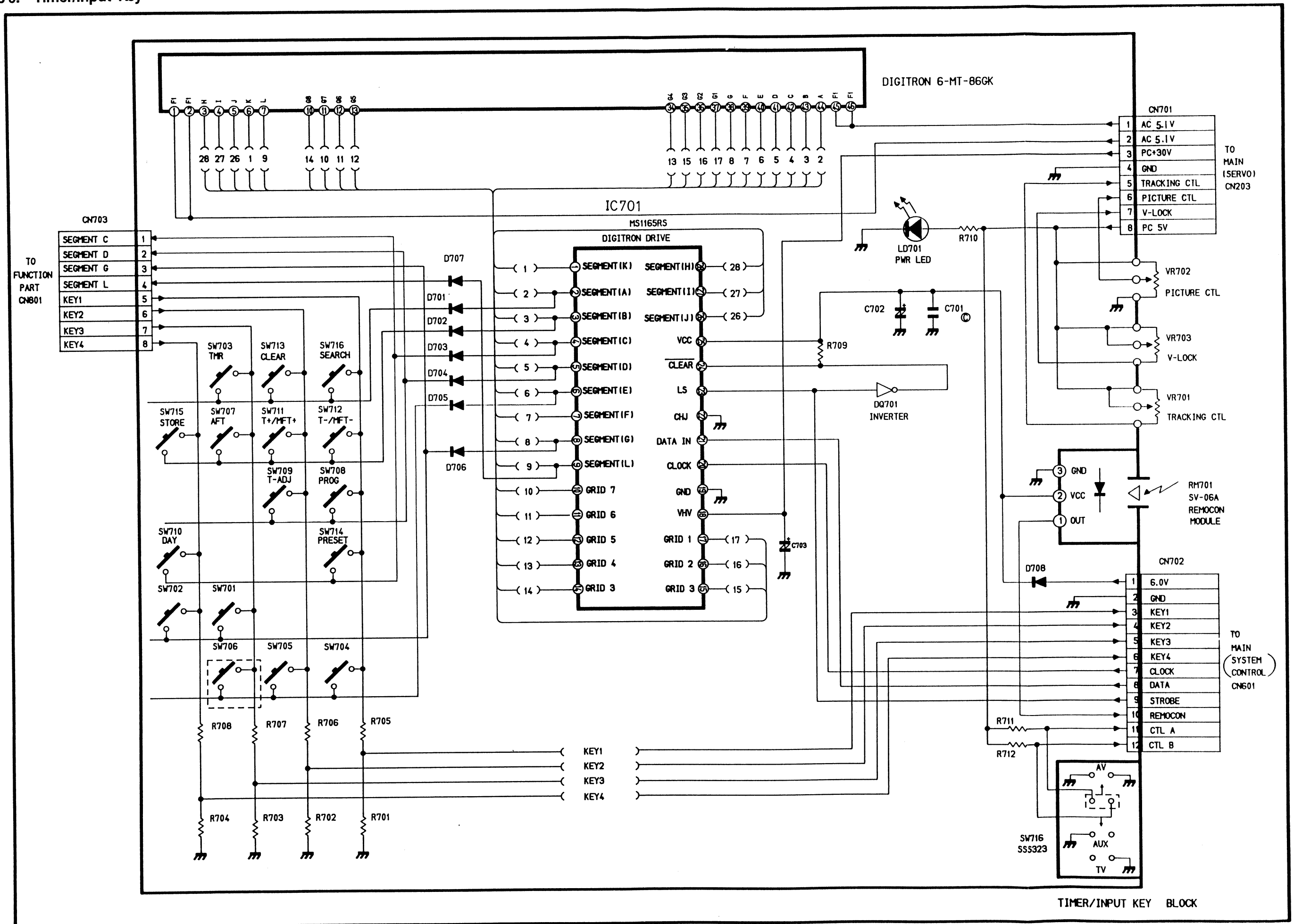


8-7. Tuner/Demodulator

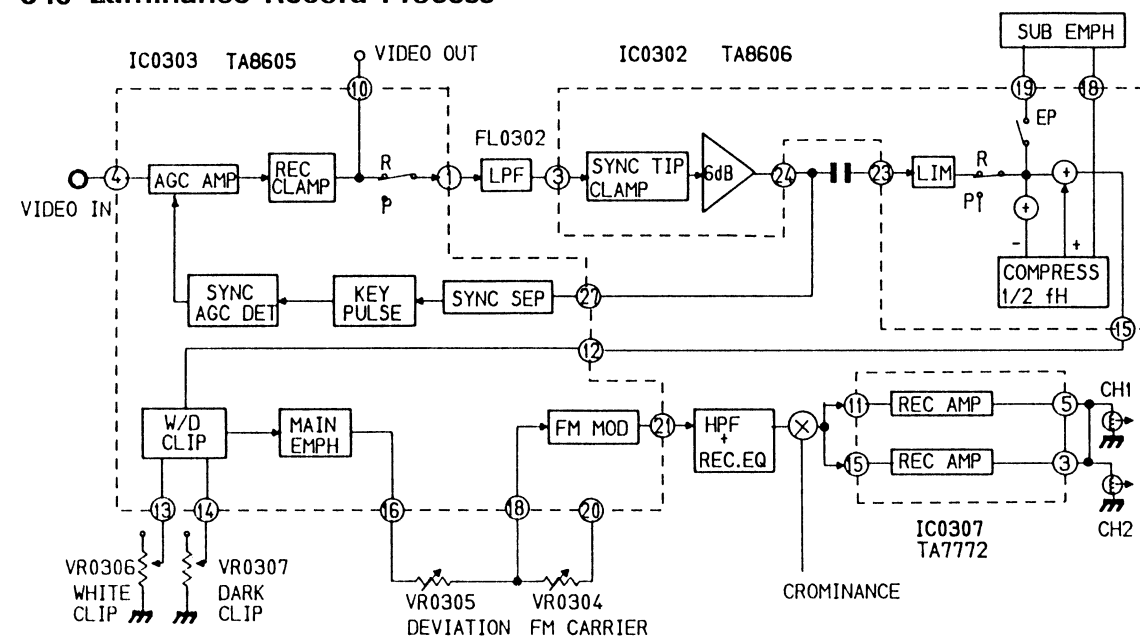


8-8. Audio

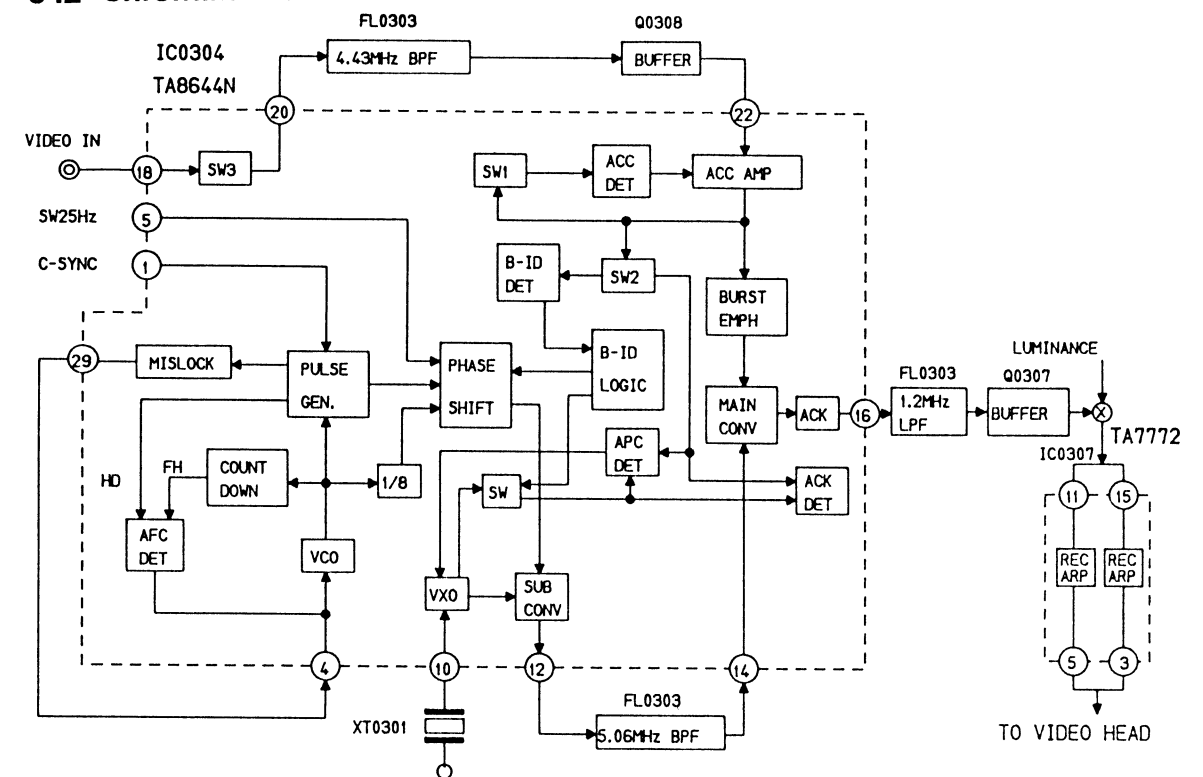




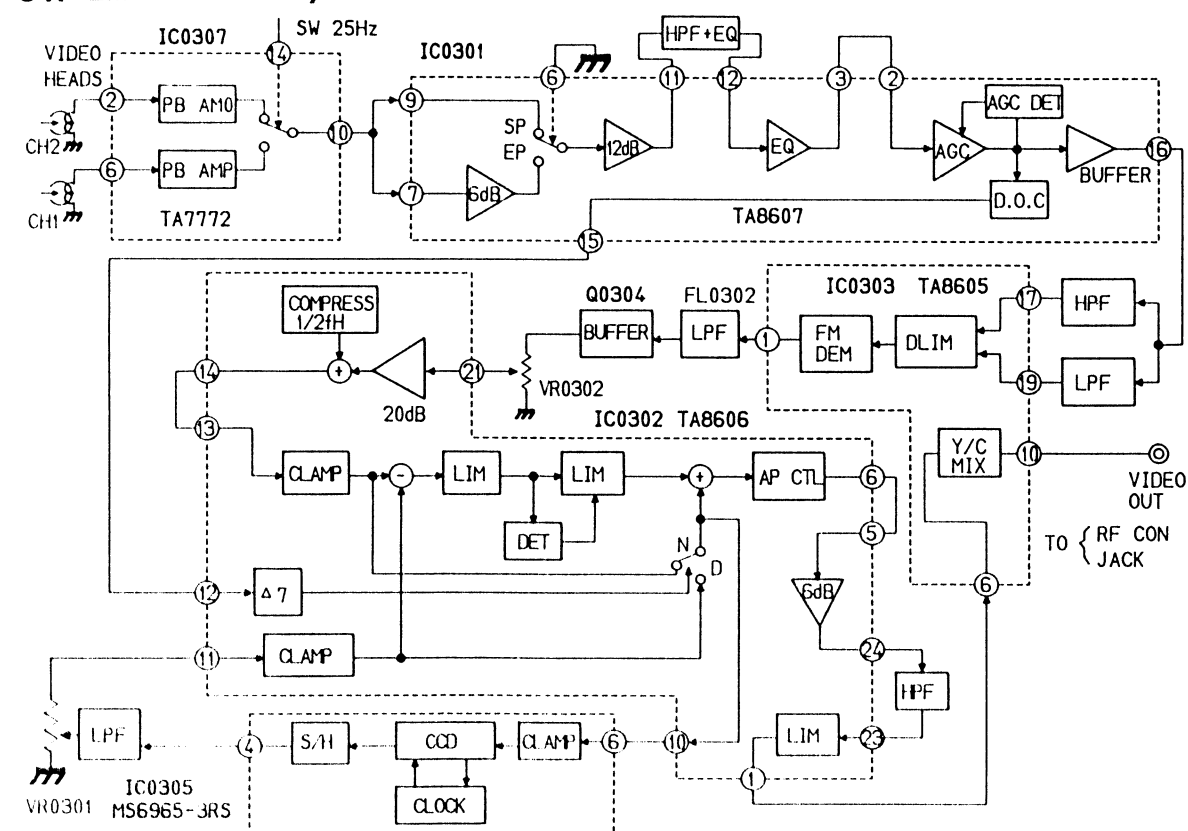
8-10 Luminance Record Process



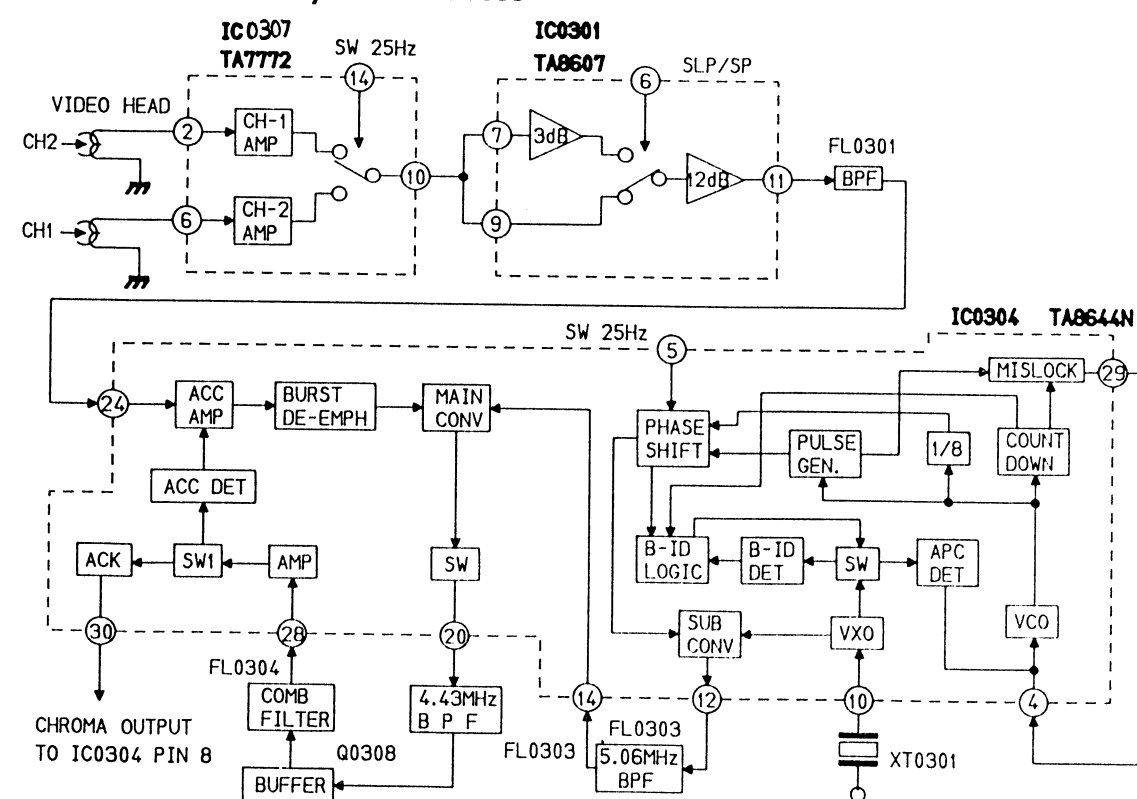
8-12 Chrominance Record Process



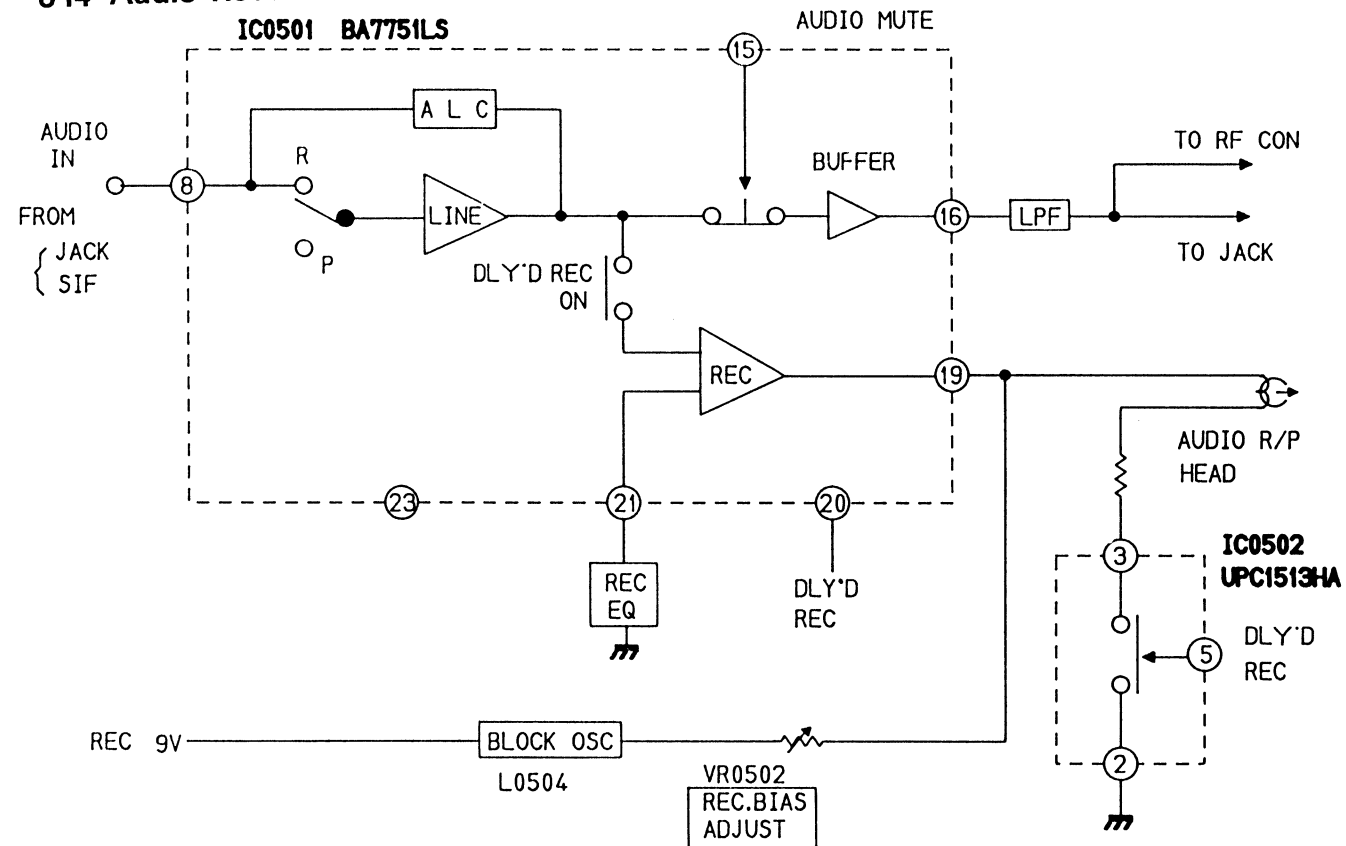
8-11 Luminance Playback Process



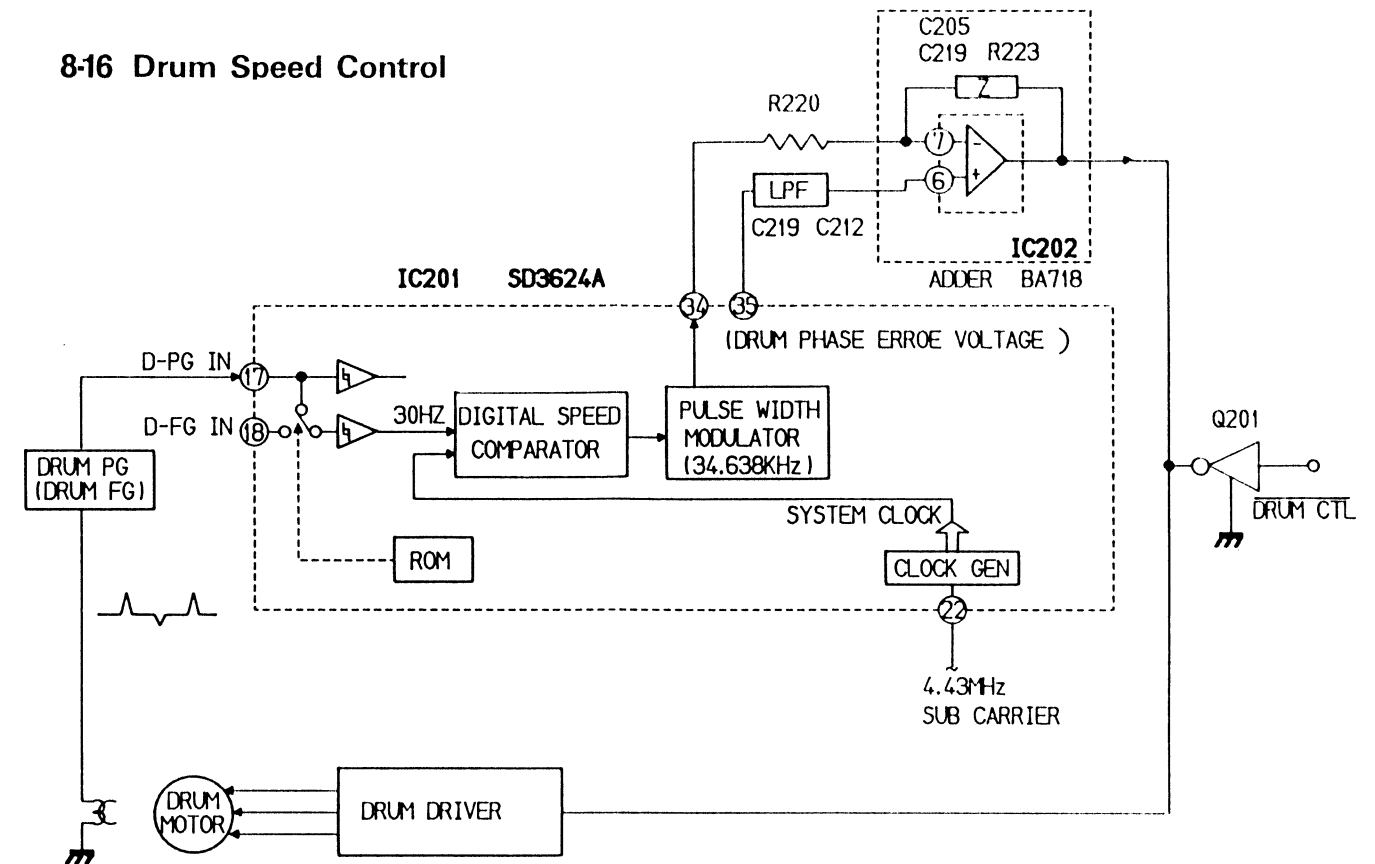
8-13 Chrominance Playback Process



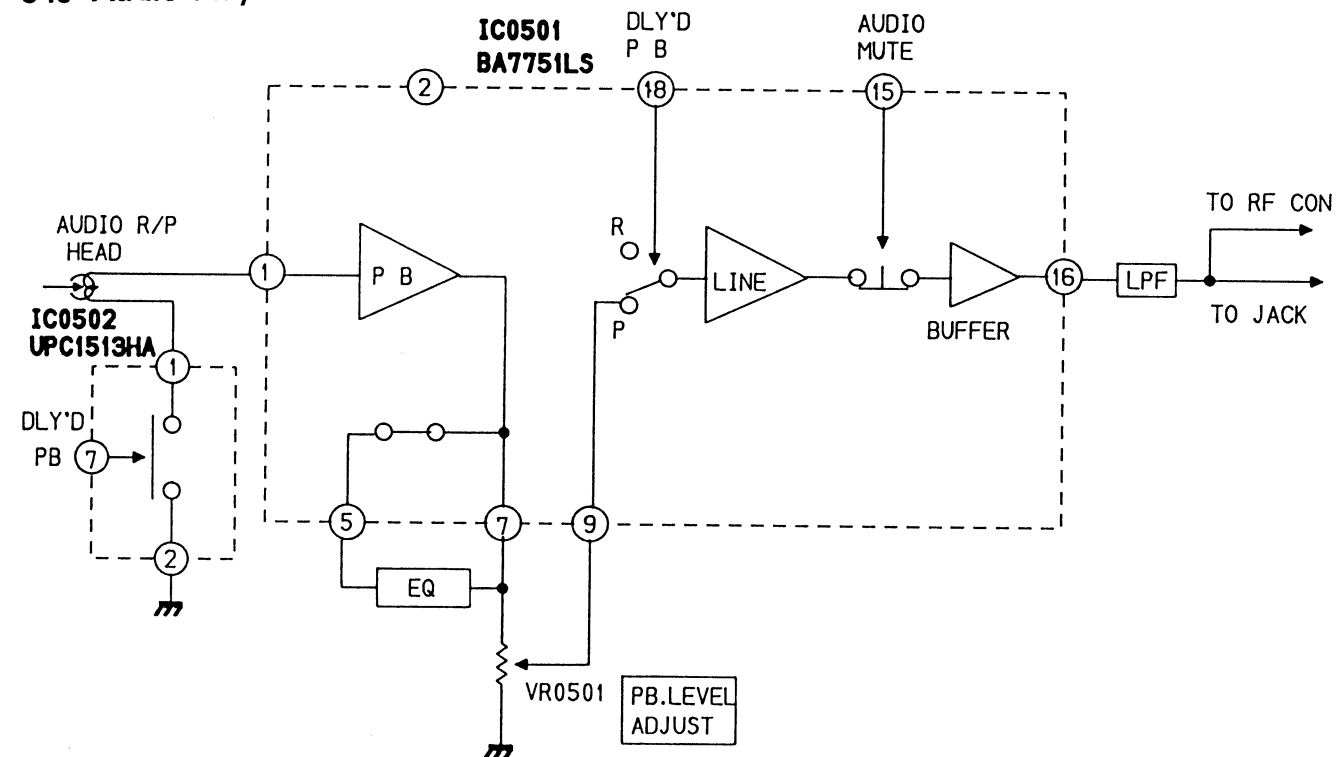
8-14 Audio Record Process



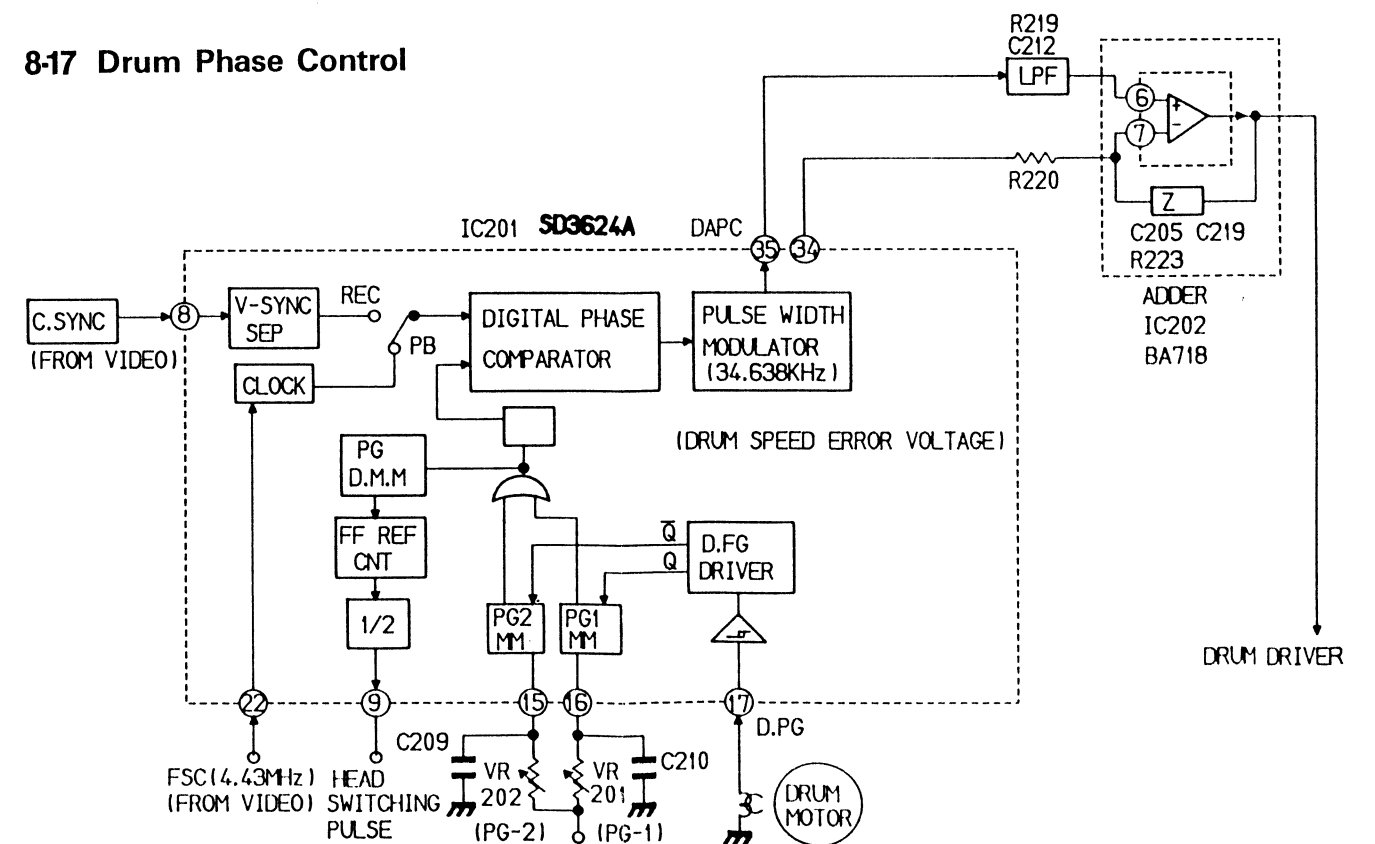
8-16 Drum Speed Control



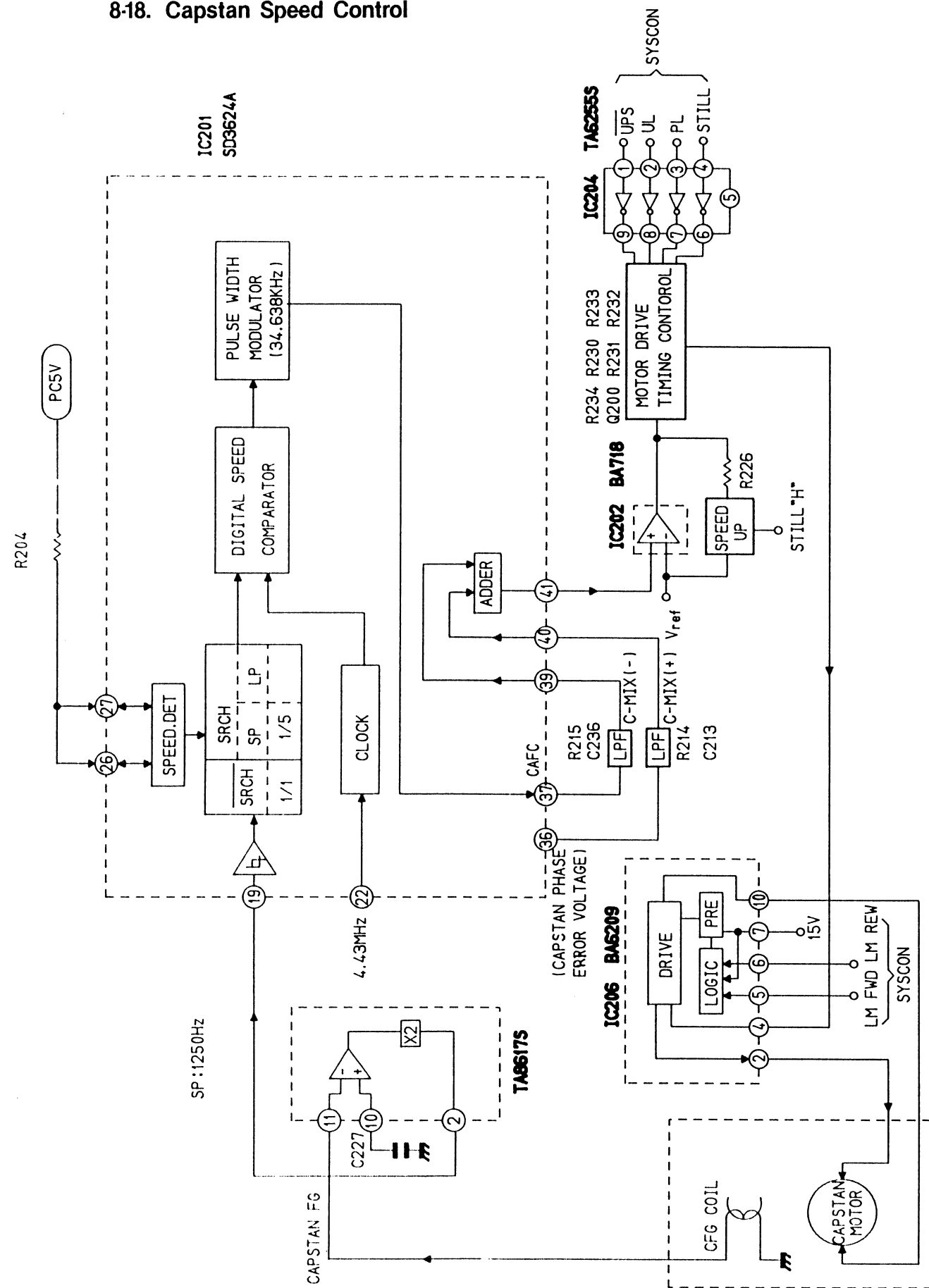
8-15 Audio Playback Process



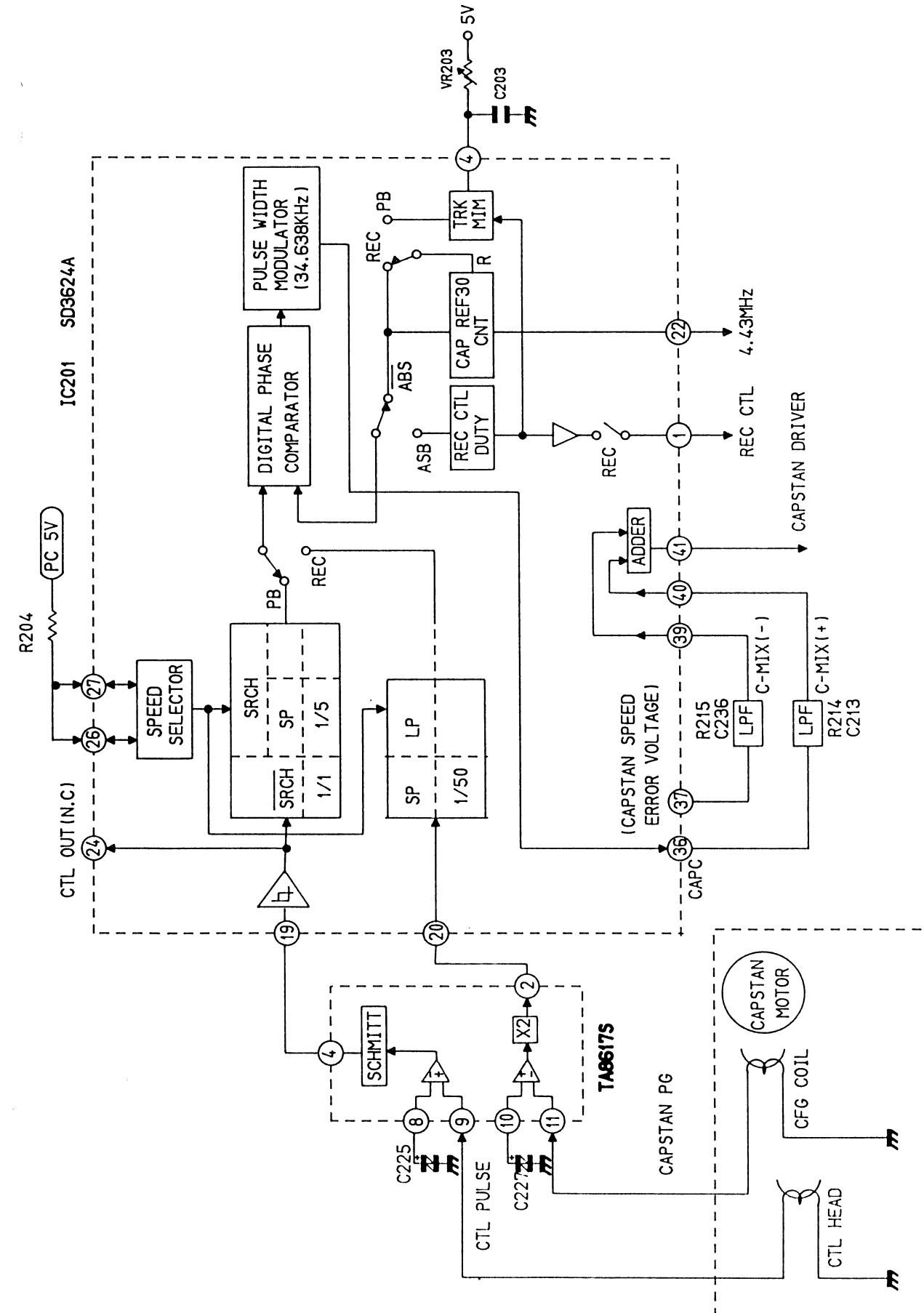
8-17 Drum Phase Control



8-18. Capstan Speed Control

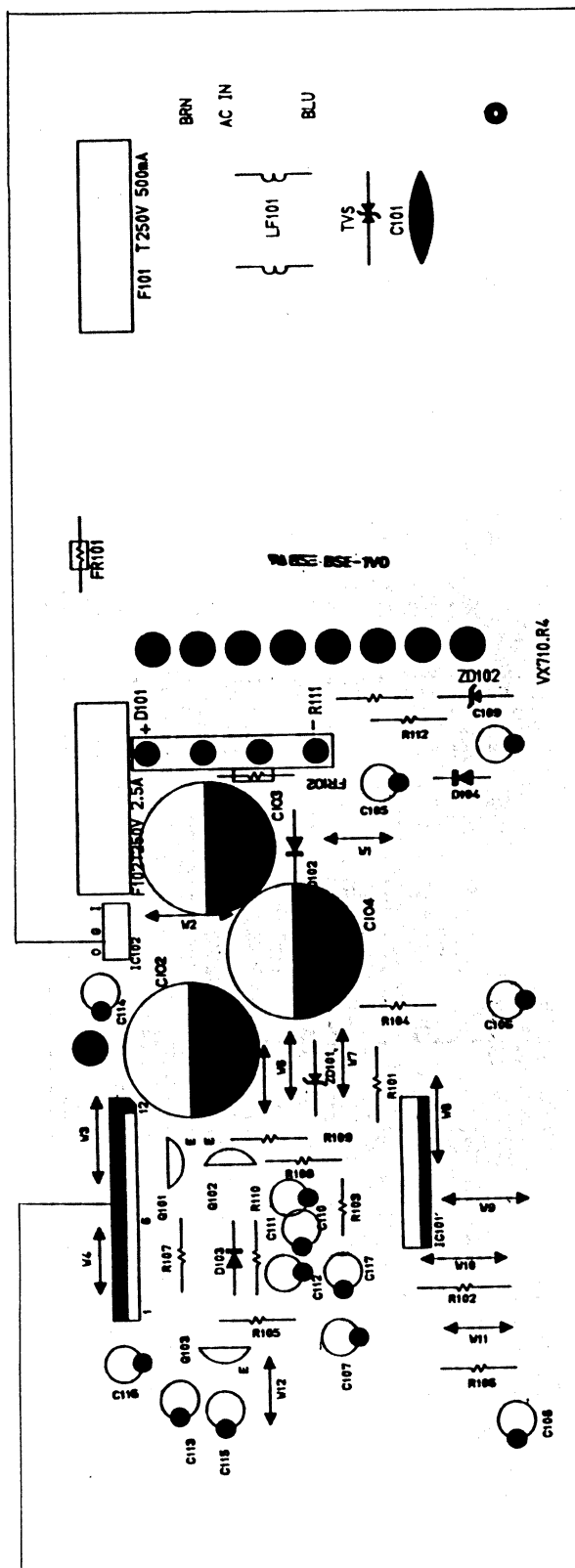


8-19. Capstan Phase Control



9. CIRCUIT BOARD

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[illegible]

IC102	1	IN PUT
	2	GND
	3	OUT DUT

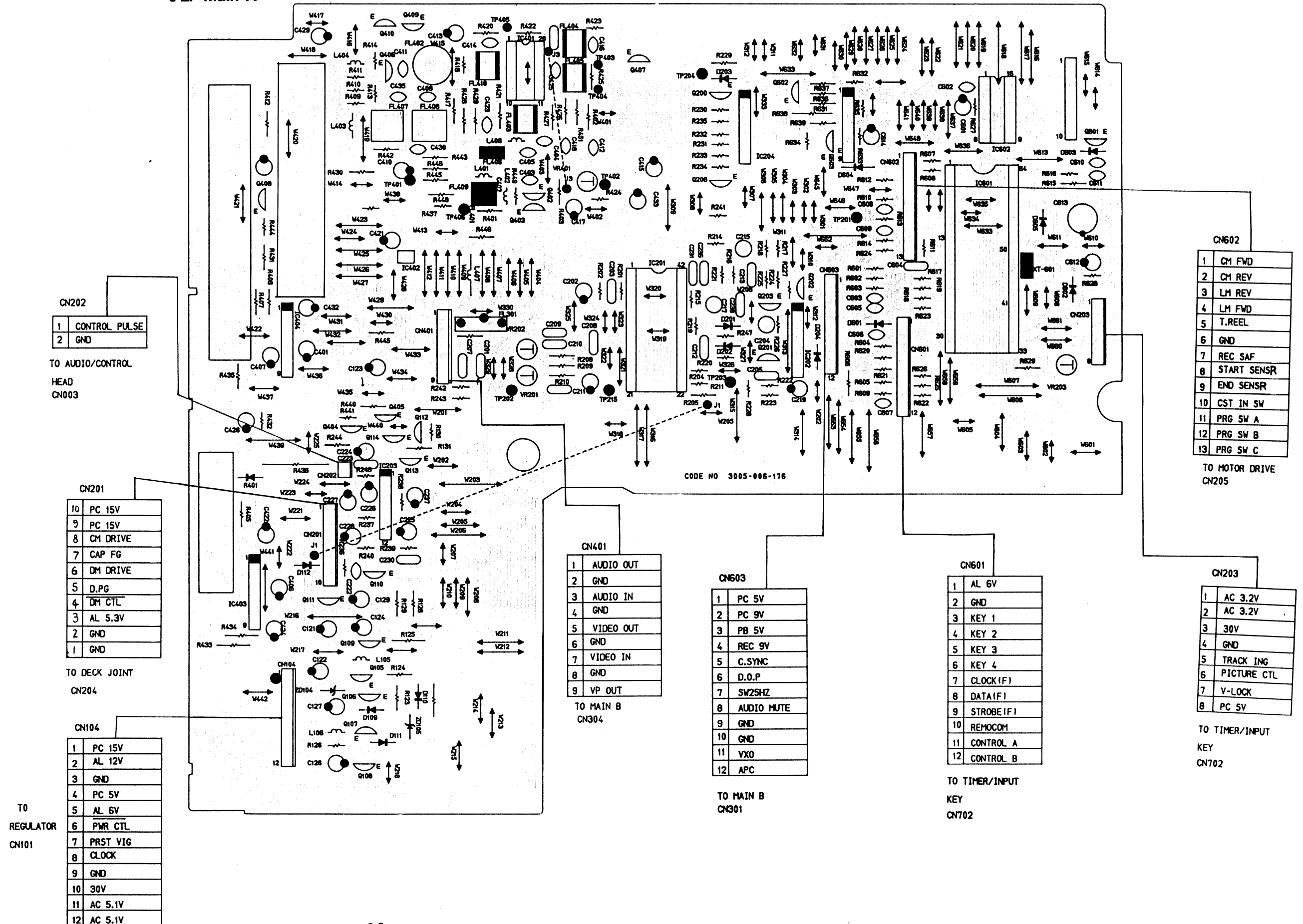
TO DRUM ASSY

TO DRUM ASSY

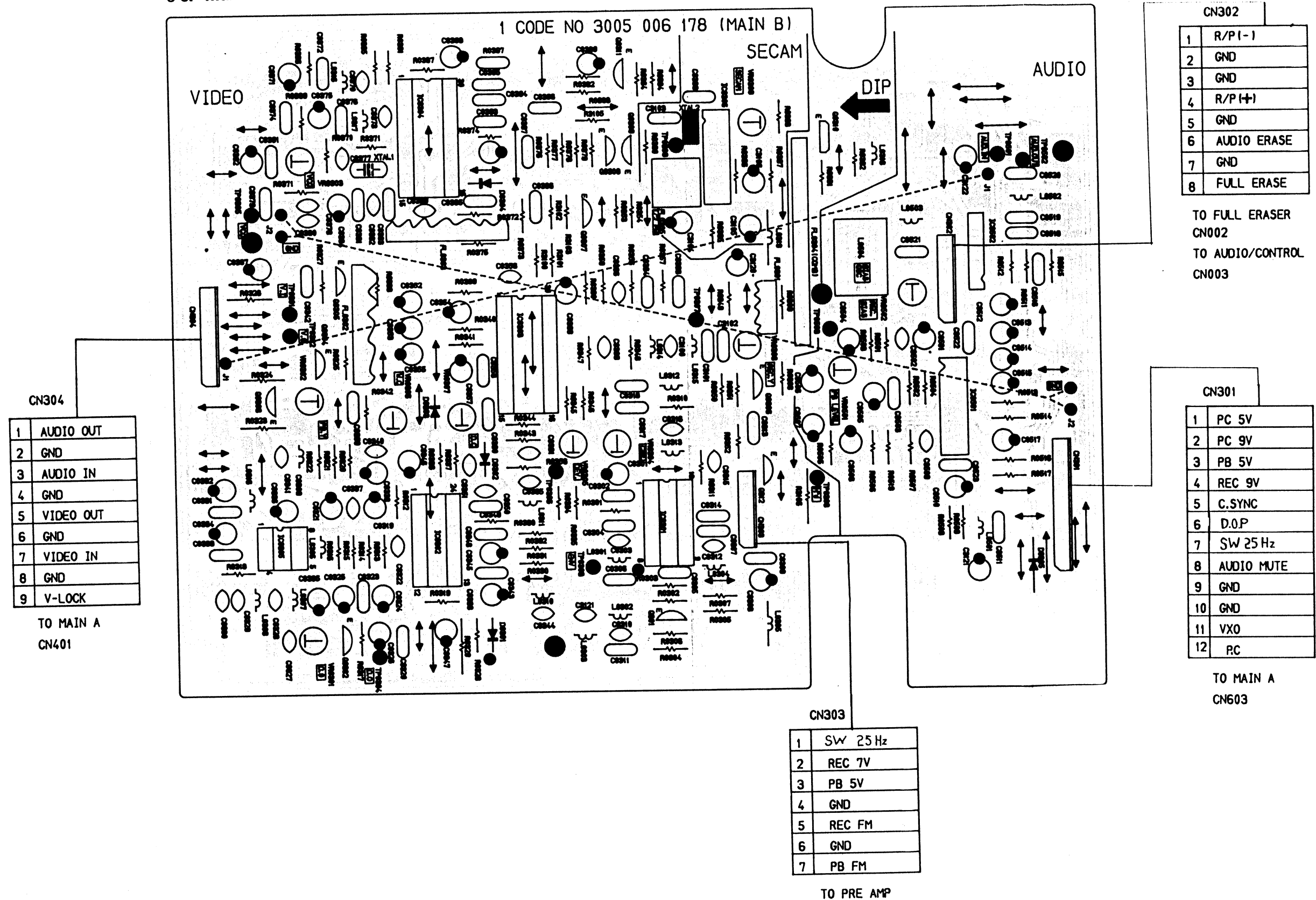
1	PC 15V
2	AL 12V
3	GND
4	PC 5V
5	AL 6V
6	PWR CTL
7	PRST.VTG
8	CLOCK
9	GND
10	30V
11	AC 5.1V
12	AC 5.1V

TO MAIN A
CN104

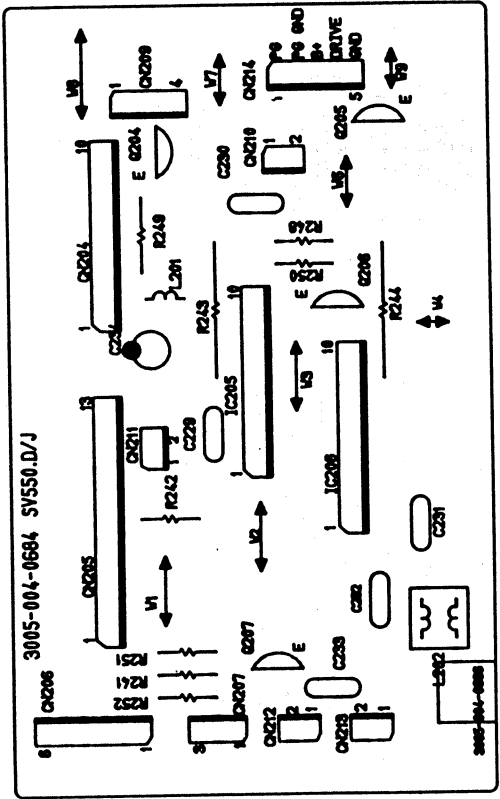
9-2. Main A



9-3. Main B



9-4. Deck Joint



CN204	1	PC 15 V
	2	PC 15 V
	3	CM DRIVE
	4	CAP.FG
	5	DM DRIVE
	6	D. PG
	7	DM CTL
	8	AL 5.3V
	9	GND
	10	GND

To
MAIN
CN201

CN205	1	CM FWD
	2	CM REV
	3	LM REV
	4	LM FWD
	5	T.REEL
	6	GND
	7	REC.SAF
	8	START SENSOR
	9	END SENSOR
	10	CST IN SW
	11	PRG SW A
	12	PRG SW B
	13	PRG SW C

To
MAIN
CN602

CN206	1	AL 5.3V
	2	GND
	3	REC.SAF
	4	START SENSOR
	5	END SENSOR
	6	CST IN SW

To
START SENSOR

CN209	1	PRG SW A
	2	PRG SW B
	3	PRG SW C
	4	GND

To
PROGRAM SWITCH

CN211	1	GND
	2	AL 5.3V

To
CASSETTE LED

CN213	1	CAP.FG
	2	GND

To
CAPSTAN MOTOR

CN214	1	D. PG
	2	GND(PG)
	3	PC 15 V
	4	DM DRIVE
	5	GND

To
DRUM MOTOR

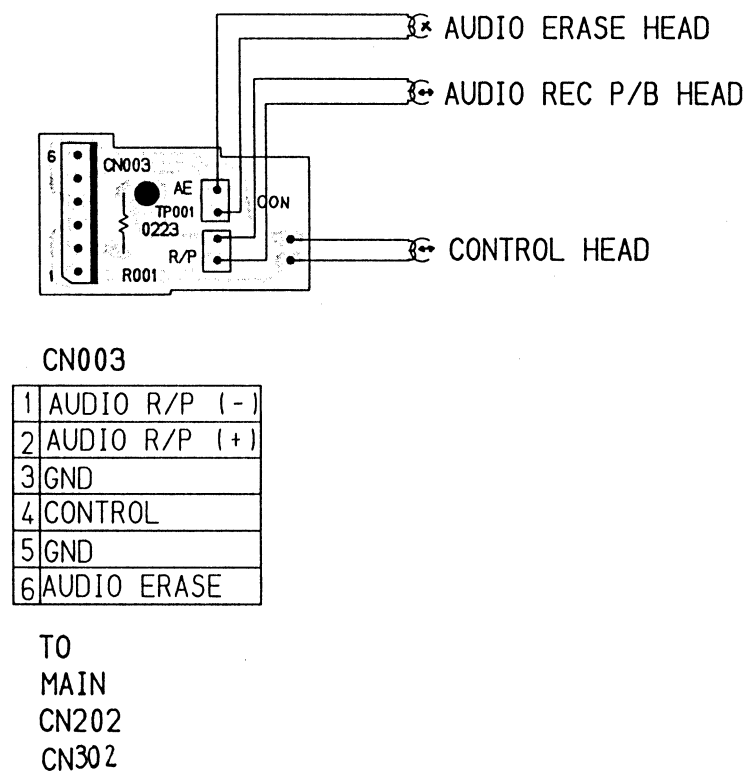
CN212	1	CAP. MOTOR (-)
	2	CAP. MOTOR (+)

To
CAPSTAN MOTOR

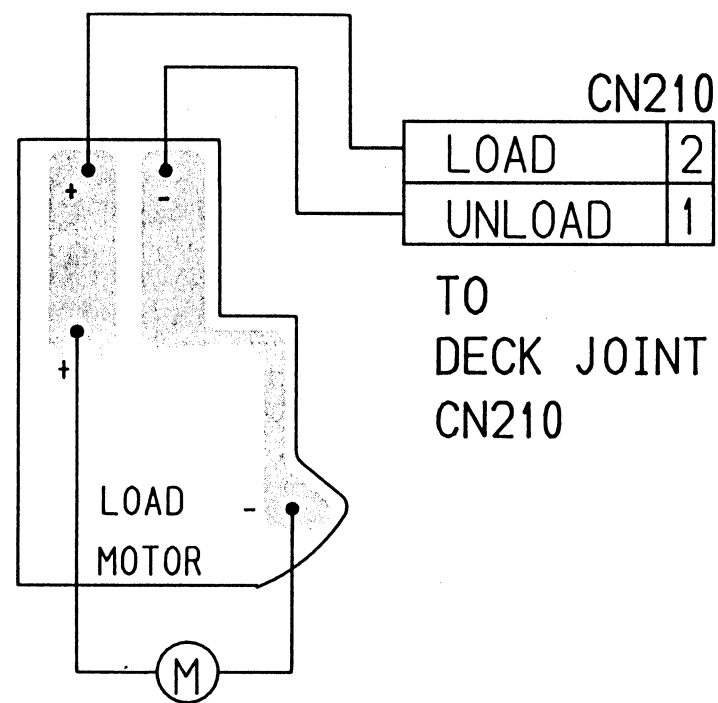
CN210	1	UNLOAD
	2	LOAD

To
LOADING MOTOR

9-5. Audio/Control Head

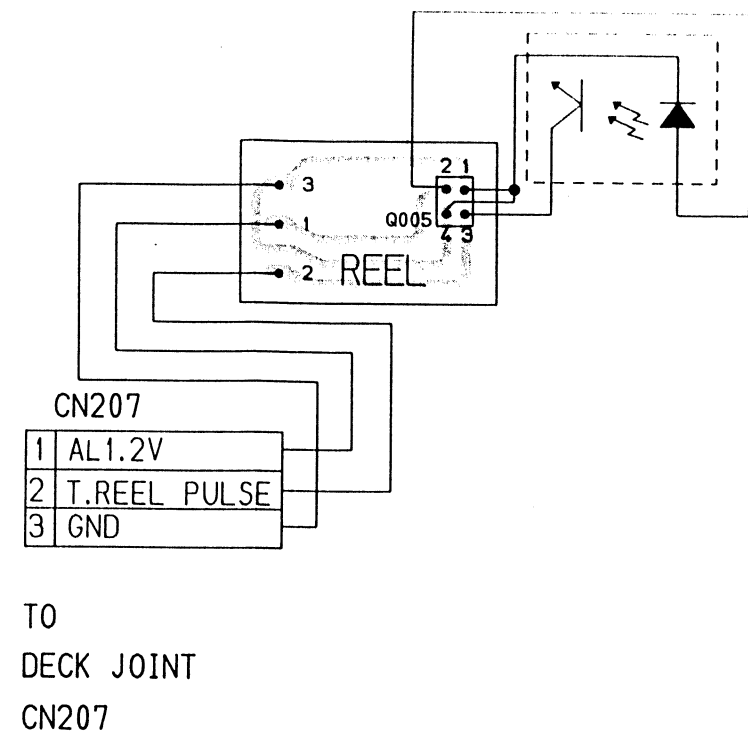


9-6. Loading Motor

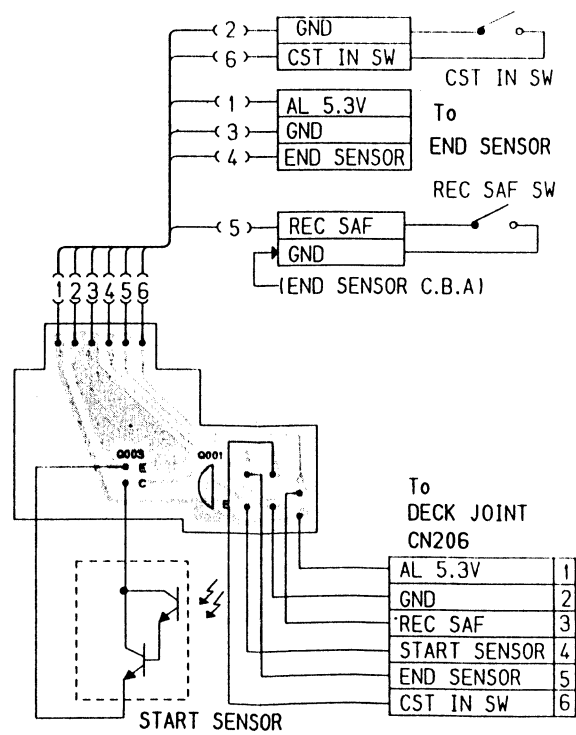


9-5

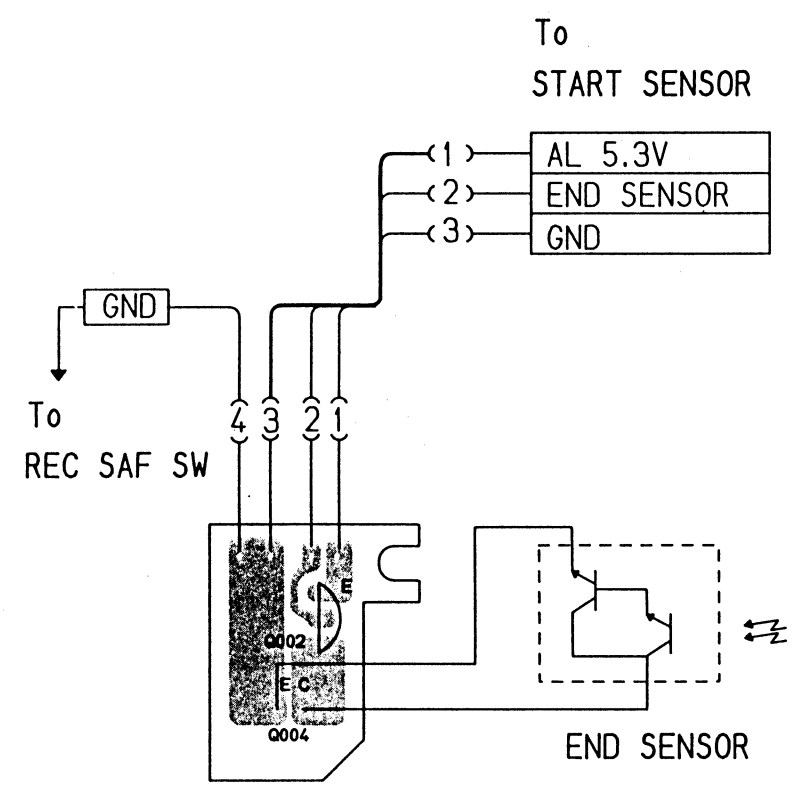
9-7. Reel Sensor



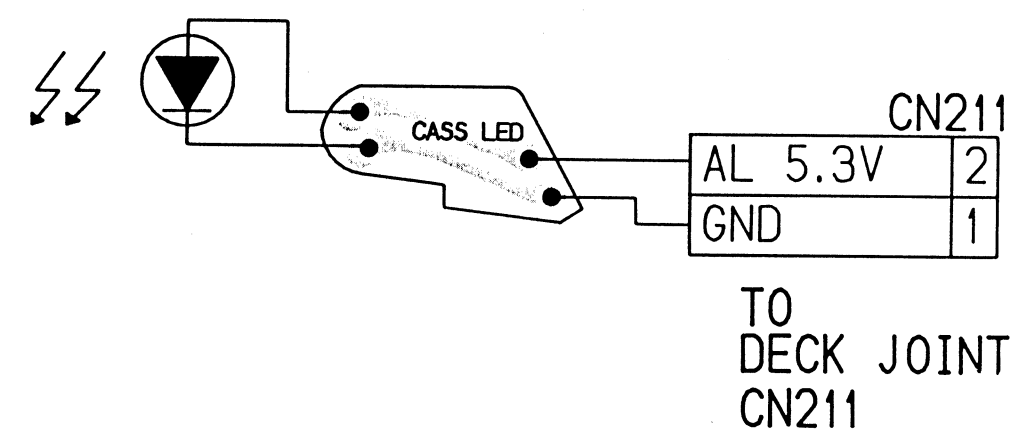
9-8. Start Sensor



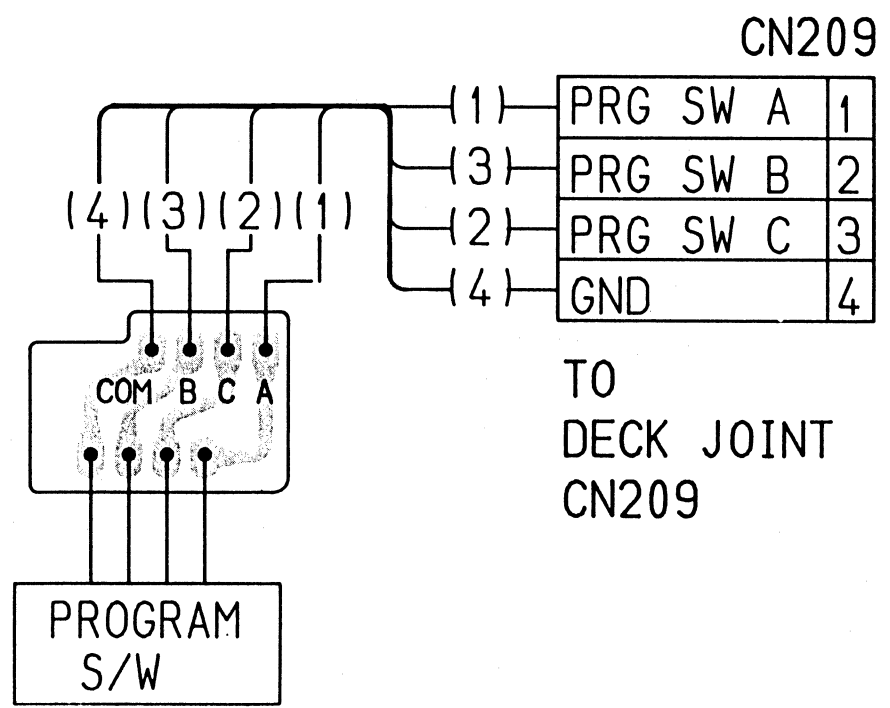
9-9. End Sensor



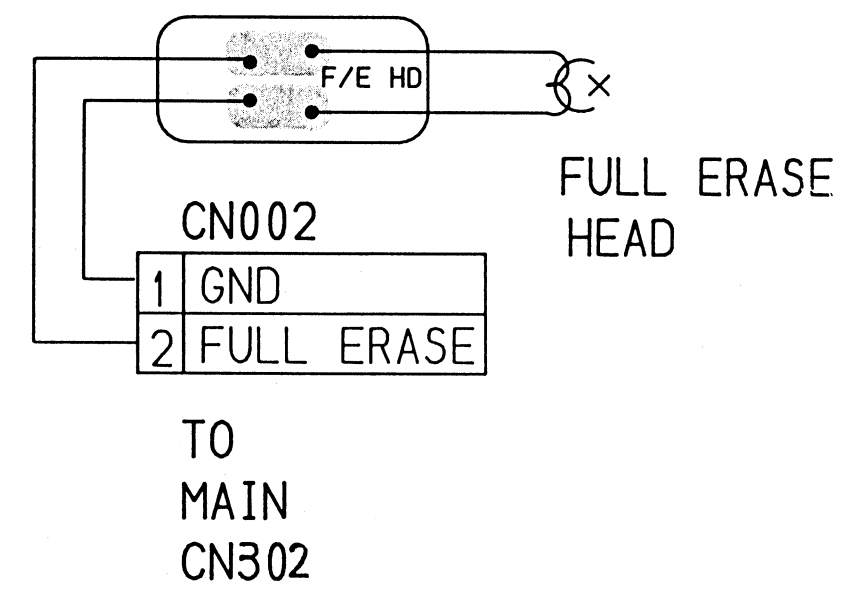
9-11. Cassette Led



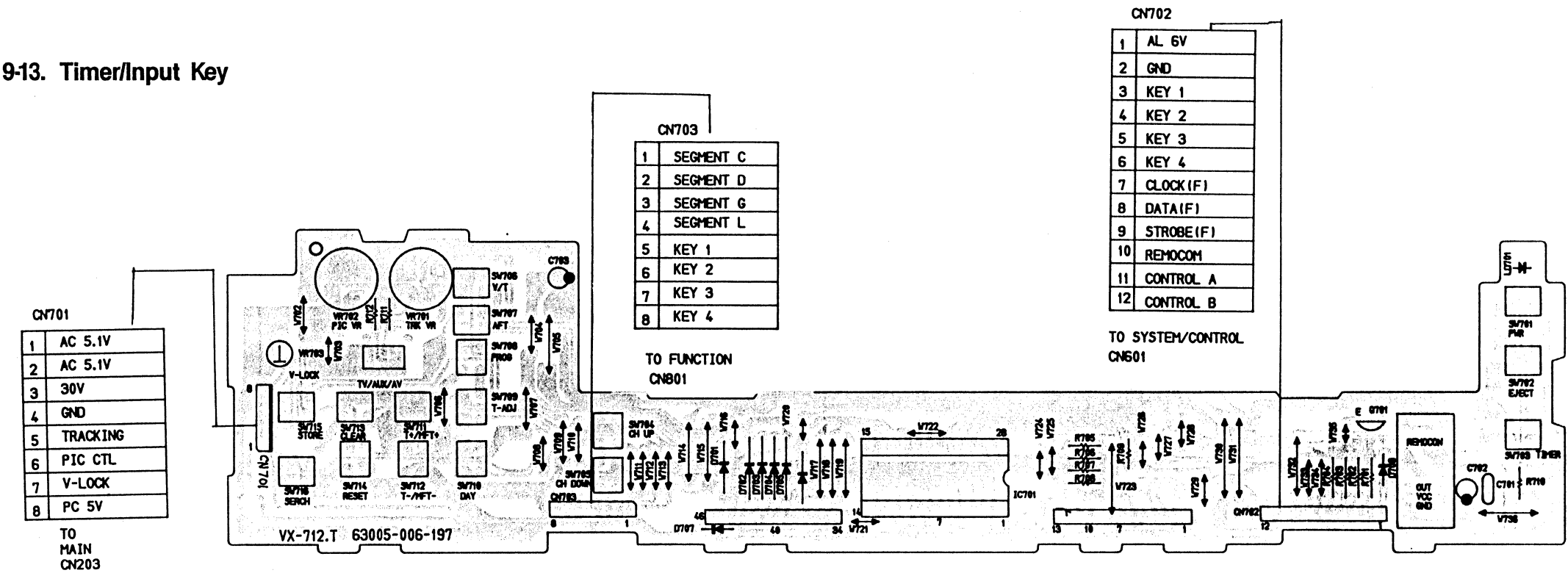
9-10. Program Switch



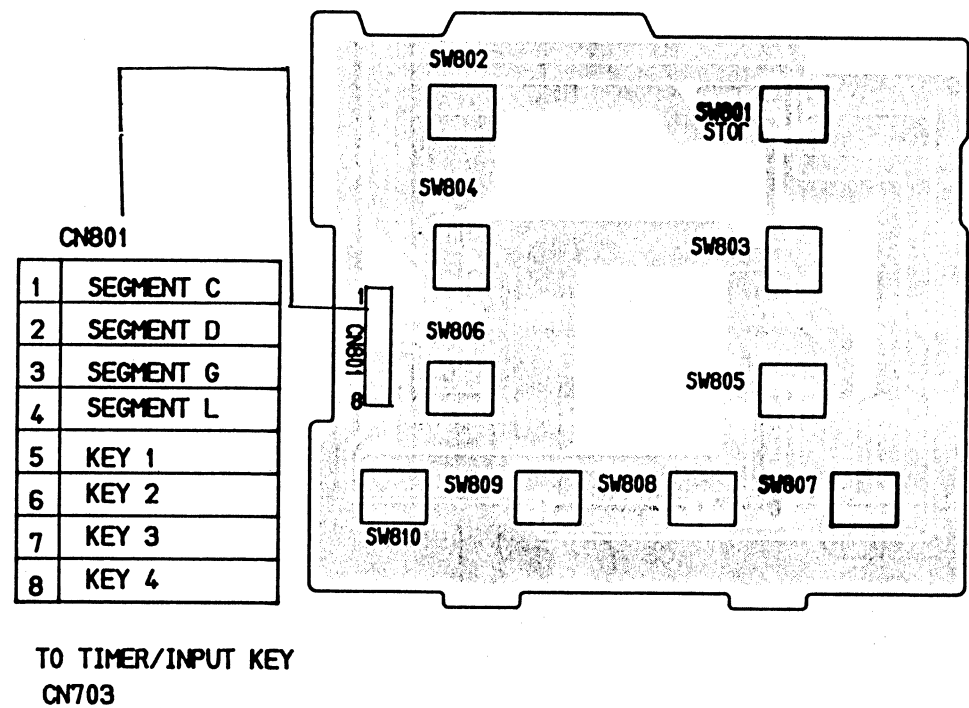
9-12. Full Eraser Head



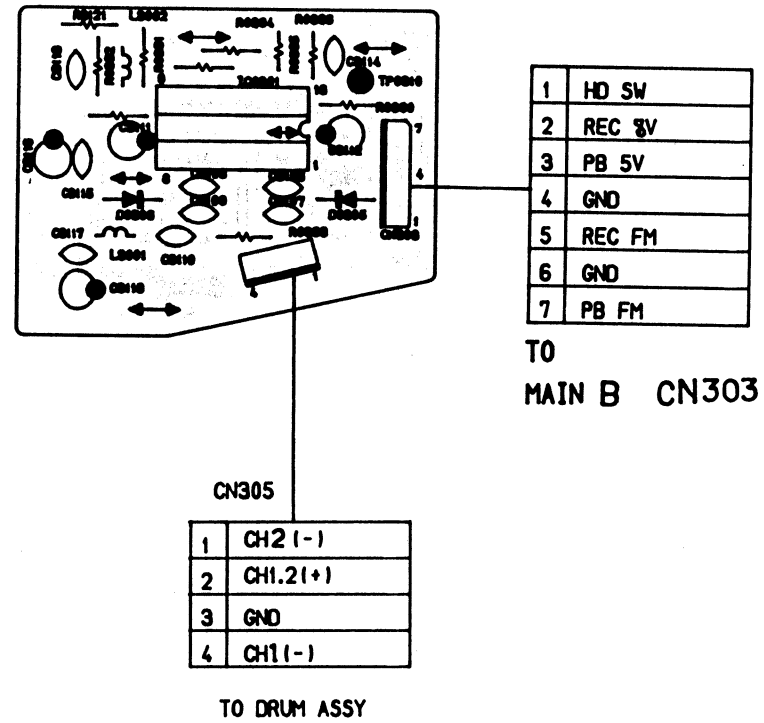
9-13. Timer/Input Key



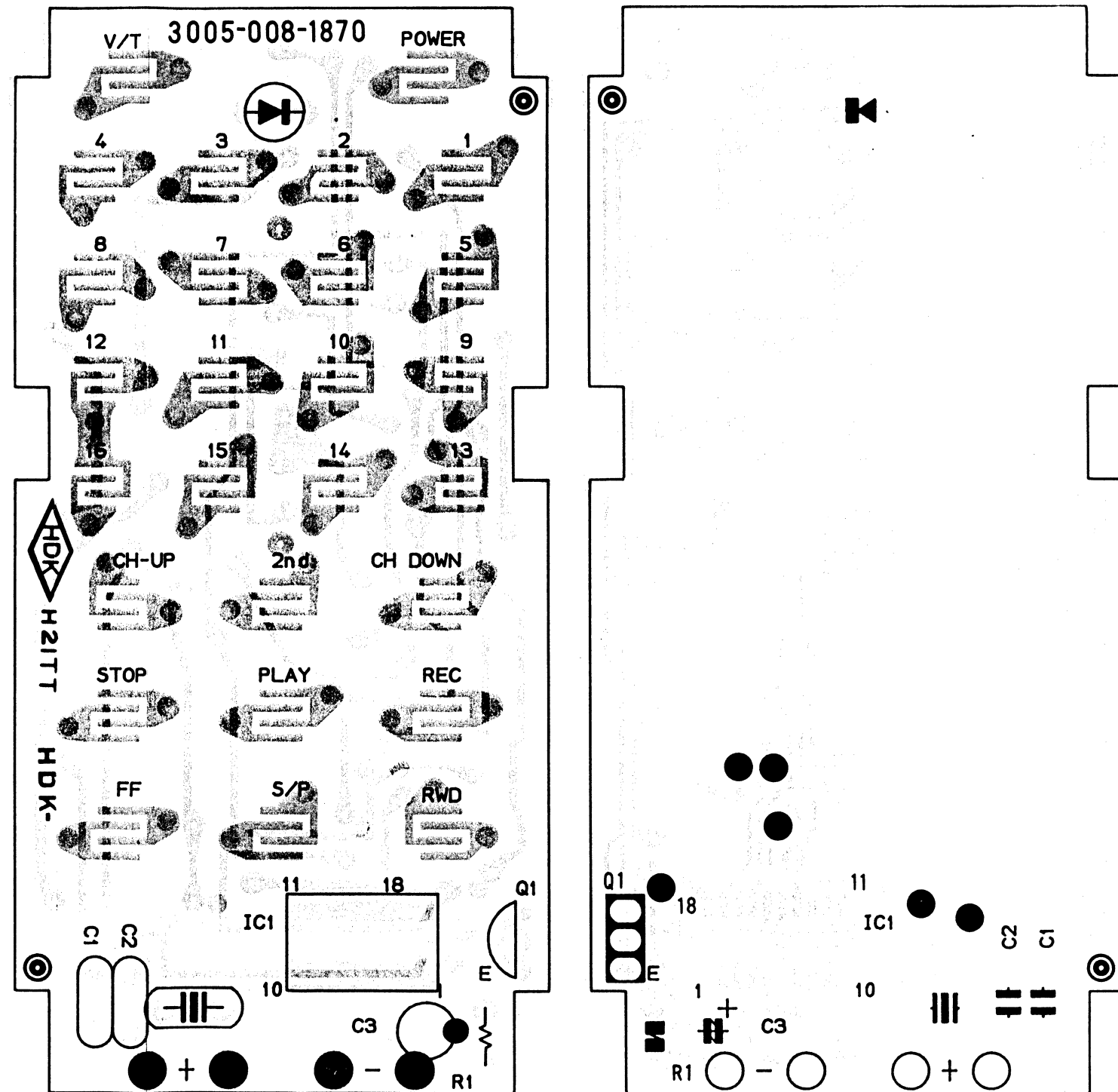
9-14. Function Switch



9-15. Pre-Amp



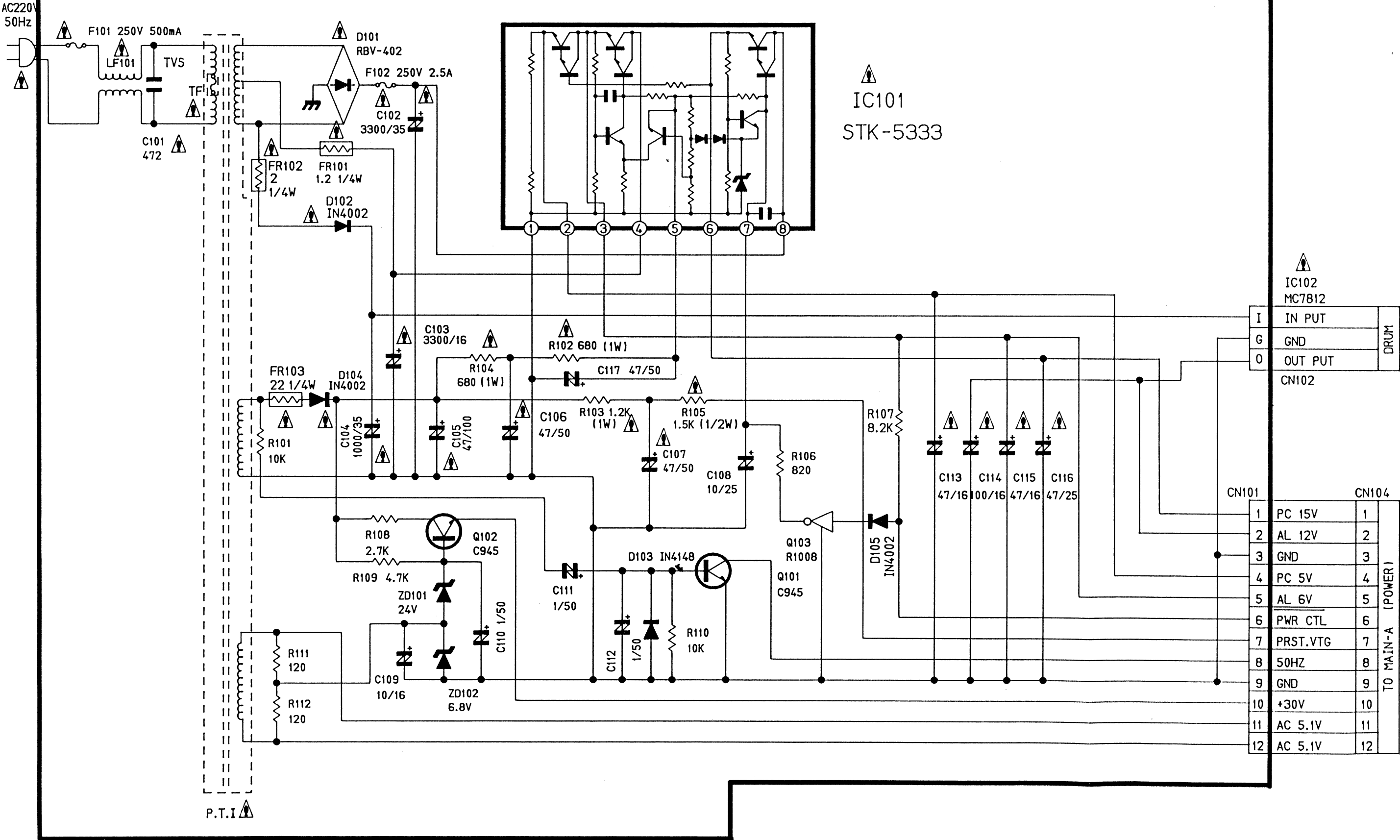
9-16. Remote Control

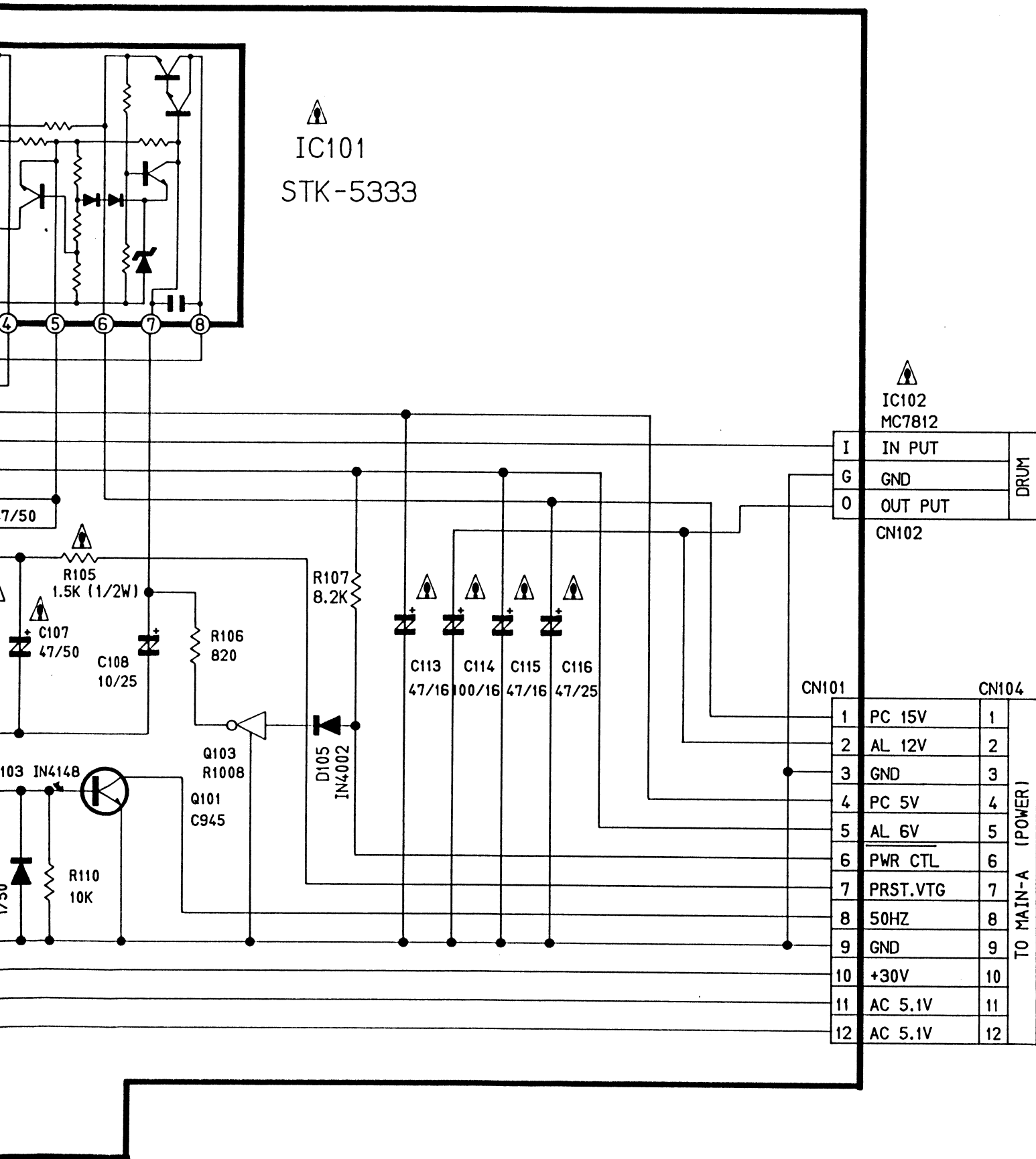


10. SCHEMATICS

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10-1. Regulator





REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 101						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	0	0	0	0	0	0
PIN 2	5	5	5	5	5	5	5
PIN 3	6	6	6	6	6	6	6
PIN 4	10	9	9	9	9	9	9
PIN 5	21	21	21	21	21	21	21
PIN 6	15	15	15	15	15	15.5	15.5
PIN 7	17	16.5	16.5	16.5	16.5	16.5	16.5
PIN 8	22	21	22	21	21	21	21

Regulator C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 102						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
I	19	19	19	19	19	19	19
G	0	0	0	0	0	0	0
O	13	12.5	12.5	12.5	12.5	13	13

Regulator C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD. S		
Tr No.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q 101	0	5	1.2	0	5	1.2	0	5	1.2	0	5	1.2	0	5	1.2	0	5	2	0	5	2
Q 102	32	32	32.5	31	31	32	32	32	32.5	31	31.5	32	31.5	32	32.5	31.5	32	32.5	31.5	32	32.5
Q 103	0	16	0	0	16	0	0	16	0	0	16	0	0	16.5	0	0	16.5	0	0	16.5	0

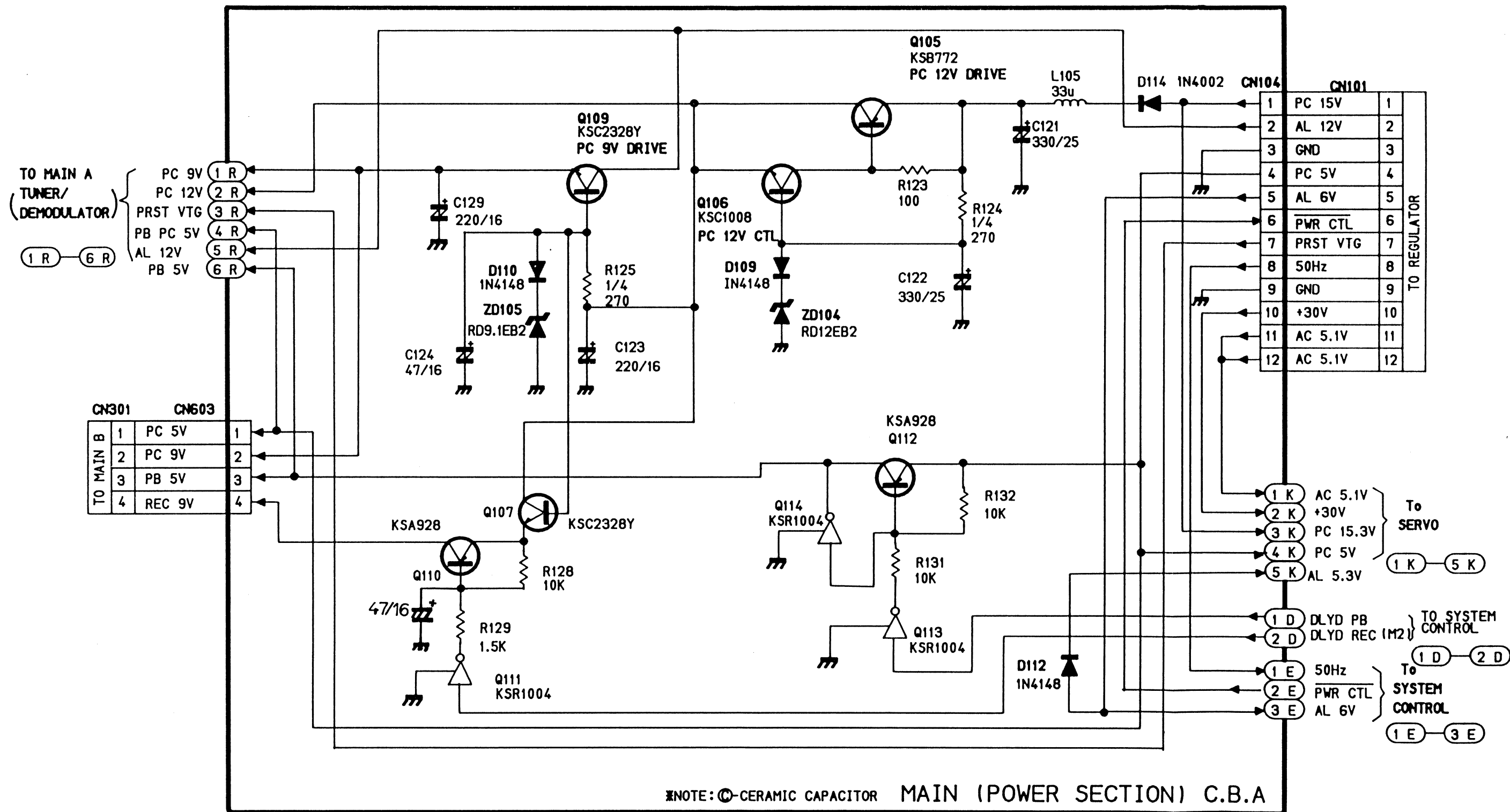
Regulator C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

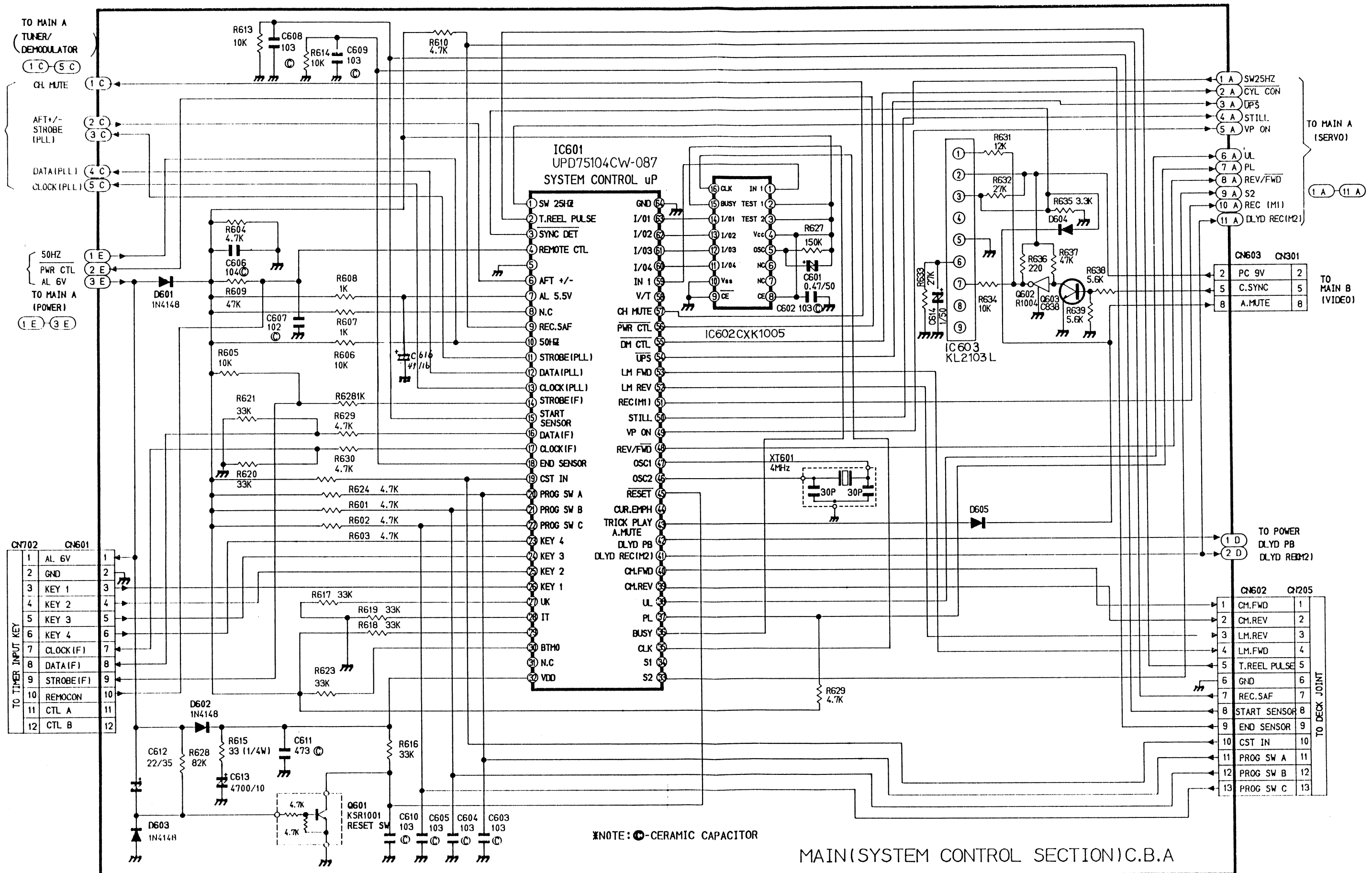
MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD. S		
TRNO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q 105	15	12	15	15	12	15	15	12	15	15	12	15	15	12	15	15	12	15	15	12	15
Q 106	12	15	13	12	15	13	12	15	13	12	15	13	12	15	13	12	15	13	12	15	13
Q 107	9.2	12	10	4.2	12	10	4.2	12	10	4.2	12	10	9.2	12	10	9.2	12	10	9.2	12	10
Q 109	9	12.2	10	9	12.2	10	9	12.2	10	9	12.2	10	9	12.2	10	9	12.2	10	9	12.2	10
Q 110	9.2	0	9.2	9.2	9	8.6	9.2	0	9.2	9.2	0	9.2	9.2	0	9.2	9.2	0	9.2	9.2	0	9.2
Q 111	0	9.2	0	0	0	5	0	9.2	0	0	9.2	0	0	9.2	0	0	9.2	0	0	9.2	0
Q 112	5	0.2	4.6	5	0.2	4.6	5.2	5	4.5	5	0.2	4.6	5	0.2	4.6	5	0.2	4.6	5	0.2	4.6
Q 113	0	4	0	0	4	0	0	0	5	0	4	0	0	4	0	0	0	5	0	0	5
Q 114	0	0.2	4	0	0.2	4	0	5	0	0	0.2	4	0	0.2	4	0	5	0	0	5	0

Main (Power) C.B.A

10-2. Power



10-3. System Control



REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	IC 601						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	4.5	2.0	2.0	2.1	2.1	2.1	2.1
PIN 2	0	—	—	—	—	—	—
PIN 3	0	0	0	0	0	0	0
PIN 4	5	5	5	5	5	5	5
PIN 5	0	0	0	0	0	0	0
PIN 6	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 7	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 8	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 9	0	5	0	5	5	5	5
PIN 10	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 11	0	0	0	0	0	0	0
PIN 12	5	5	5	5	5	5	5
PIN 13	0	0	0	0	0	0	0
PIN 14	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 15	0	0	0	0	0	0	0
PIN 16	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 17	5	5	5	5	5	5	5
PIN 18	0	0	0	0	0	0	0
PIN 19	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 20	0	5.1	5.1	5.1	5.1	0	5.1
PIN 21	4.6	0	0	0	0	4.8	0
PIN 22	0	5.1	5.1	0	0	5	5
PIN 23	0	0	0	0	0	0	0
PIN 24	0	0	0	0	0	0	0
PIN 25	0	0	0	0	0	0	0
PIN 26	0	0	0	0	0	0	0
PIN 27	0	0	0	0	0	0	0
PIN 28	0	0	0	0	0	0	0
PIN 29	5.1	5	5	5	5	5	5
PIN 30	5.1	5	5	5	5	5	5
PIN 31	0	0	0	0	0	0	0
PIN 32	5.1	5	5	5	5	5	5
PIN 33	0	0	0	5	5	5	5
PIN 34	0	0	0	0	0	0	0
PIN 35	5.1	5	5	5	5	5	5
PIN 36	4.8	4.8	4.8	4.8	4.8	4.8	4.8
PIN 37	0	0	0	0	0	0	0
PIN 38	0	0	0	0	0	0	0

Main (System Control) C.B.A

MODE	IC 601						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 39	4.8	0	0	4.8	0	4.8	0
PIN 40	4.8	4.8	4.8	0	4.8	0	5
PIN 41	0	5	0	0	0	0	0
PIN 42	0	0	5	0	0	5	5
PIN 43	0	0	0	0	0	5	5
PIN 44	0	0	0	0	0	0	0
PIN 45	5	5	5	5	5	5	5
PIN 46	2.8	2.8	2.8	2.8	2.8	2.8	2.8
PIN 47	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 48	0	0	0	5	0	5	0
PIN 49	0	0	0	5	5	5	5
PIN 50	0	0	0	0	0	0	0
PIN 51	0	5	0	0	0	0	0
PIN 52	4.8	4.8	4.8	4.8	4.8	4.8	4.8
PIN 53	4.8	4.8	4.8	4.8	4.8	4.8	4.8
PIN 54	0	5	5	5	5	5	5
PIN 55	5	0	0	5	5	0	0
PIN 56	0	0	0	0	0	0	0
PIN 57	0	0	0	0	0	0	0
PIN 58	5	5	5	5	5	5	5
PIN 59	5	5	5	5	5	5	5
PIN 60	5	5	5	5	5	5	5
PIN 61	5	5	5	5	5	5	5
PIN 62	5	5	5	5	5	5	5
PIN 63	5	5	5	5	5	5	5
PIN 64	0	0	0	0	0	0	0

Main (System Control) C.B.A

MODE	IC 602						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	5	5	5	5	5	5	5
PIN 2	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 3	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 5	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 6	0	0	0	0	0	0	0
PIN 7	0	0	0	0	0	0	0
PIN 8	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 9	0	0	0	0	0	0	0
PIN 10	0	0	0	0	0	0	0
PIN 11	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 12	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 13	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 14	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 15	5	5	5	5	5	5	5
PIN 16	5.1	5.1	5.1	5.1	5.1	5.1	5.1

Main (System Control) C.B.A

MODE	IC 603						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0.7	0.7	0.7	0.7	0.7	0.7	0.7
PIN 2	9.7	9.7	9.7	9.7	9.7	9.7	9.7
PIN 3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 4	2.2	2.2	2.2	2.2	2.2	2.2	2.2
PIN 5	0	0	0	0	0	0	0
PIN 6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
PIN 7	0.9	0.9	0.9	0.9	0.9	0.9	0.9
PIN 8	6	6	6	6	6	6	6

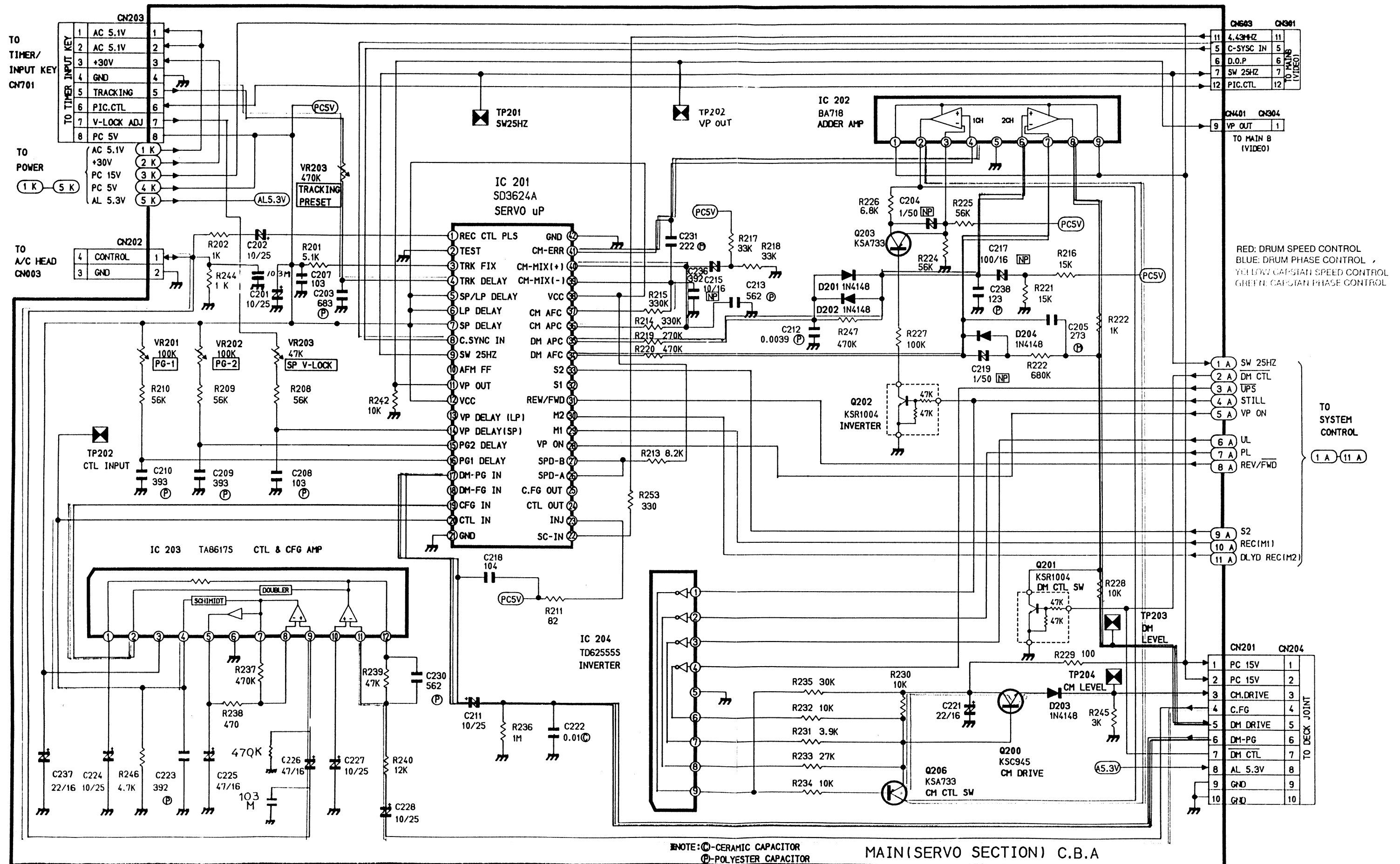
Main (System Control) C.B.A

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD. S		
Tr NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q 601	0	5	0.8	0	5	0.8	0	5	0.8	0	5	0.8	0	5	0.8	0	5	0.8	0	5	0.8
Q 602	0	1.5	4.5	0	1.5	4.5	0	1.5	4.5	0	1.5	4.5	0	1.5	4.5	0	1.5	4.5	0	1.5	4.5
Q 603	0	4.8	0.3	0	4.8	0.3	0	4.8	0.3	0	4.8	0.3	0	4.8	0.3	0	4.8	0.3	0	4.8	0.3

Main (System Control) C.B.A

TO
TIMER/
INPUT KEY
CN701



REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 201						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0.3	2.4	2.2	0.7	3.6	2.8	2.8
PIN 2	0	0	0	0	0	0	0
PIN 3	4.6	4.6	4.5	4.3	3.6	4.3	4.3
PIN 4	2.6	1.4	1	0.7	0.7	0.7	0.7
PIN 5	5.1	5.2	5.2	4.9	5.2	4.9	5
PIN 6	5.1	5.2	5.2	4.9	5.2	4.9	5
PIN 7	5.1	5.2	5.2	4.9	5.2	4.9	5
PIN 8	0.7	0.7	0.7	0.7	0.7	0.7	0.7
PIN 9	4.1	2.1	2.1	4.1	4.0	2.1	2.1
PIN 10	—	—	—	—	—	—	—
PIN 11	0	0	0	0	0	0.4	0.3
PIN 12	5.1	5.2	5.2	4.4	5.2	5	5
PIN 13	0	0	0	0	0	0	0
PIN 14	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 15	0	0	0	0	0	0	0
PIN 16	0	0	0	0	0	0	0
PIN 17	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 18	—	—	—	—	—	—	—
PIN 19	4.6	0.7	0.7	0.4	0.3	0.3	0.3
PIN 20	0	2.1	2.1	0	0	2.4	2.4
PIN 21	0	0	0	0	0	0	0
PIN 22	0.7	0.6	0.6	0.7	0.7	0.7	0.7
PIN 23	2.5	2.7	2.5	2.4	2.4	2.4	2.4
PIN 24	—	—	—	—	—	—	—
PIN 25	—	—	—	—	—	—	—
PIN 26	5	4	5	5	5	5	5
PIN 27	5	4	5	5	5	5	5
PIN 28	0	0	0	5.2	5	5.2	5
PIN 29	0	5	0	0	0	0	0
PIN 30	0	5	0	0	0	0	0
PIN 31	0	0	0	5	0	5.2	0
PIN 32	0	0	0	0	0	0	0
PIN 33	0	0	0	5	5	5	5
PIN 34	0.1	2.4	2.4	0.1	0.1	2.4	2.5
PIN 35	2.4	2.5	2.5	2.4	2.4	2.5	2.5
PIN 36	2.4	2.4	2.5	2.4	2.4	2.5	2.5
PIN 37	0	2.4	2.4	2.4	2.4	2.5	2.5
PIN 38	5.1	5.2	5.2	5	5	5	5

Main (Servo) C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 201						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 39	1	2.6	2.8	2	3	2.4	2.5
PIN 40	2.6	2.6	2.8	2	3	2.4	2.4
PIN 41	4.4	2.6	2.4	2.5	2.5	2.5	2.4
PIN 42	0	0	0	0	0	0	0

Main (Servo) C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 202						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	14.2	14.7	15	14.1	14.0	14.1	14.1
PIN 2	12.9	2.8	2.6	9.2	10.2	10.0	9.5
PIN 3	2.6	2.6	2.4	2.5	2.5	2.4	2.5
PIN 4	4.2	2.4	2.4	2.5	2.5	2.5	2.5
PIN 5	0	0	0	0	0	0	0
PIN 6	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 7	0.1	2.5	2.5	0.1	0.1	2.4	2.4
PIN 8	12.8	1.6	1.6	12.7	12.6	1.6	1.4
PIN 9	14.2	14.4	15	14.1	14.0	14.1	14.1

Main (Servo) C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 203						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	2.5	2.4	2.4	2.4	2.4	2.4	2.4
PIN 2	4.5	0.7	0.7	0.4	0.4	0.4	0.4
PIN 3	5.1	5.2	5.2	5	5	5	5
PIN 4	4.2	2.1	2.1	0	0	2.4	2.3
PIN 5	2	2.2	2	2	2	2	2
PIN 6	0	0	0	0	0	0	0
PIN 7	2	2.2	2	2	2	2	2
PIN 8	2	2.2	2	2	2	2	2
PIN 9	2	2	2	2	2	2	2
PIN 10	2.5	2.6	2.6	2.6	2.6	2.6	2.6
PIN 11	2.5	2.6	2.6	2.6	2.6	2.6	2.6
PIN 12	2.5	2.6	2.6	2.6	2.6	2.6	2.6

Main (Servo) C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

MODE	IC 204						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	5	5	5	5	5	5
PIN 2	0	0	0	0	0	0	0
PIN 3	0	0	0	0	0	0	0
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0	0	0	0	0
PIN 6	13.9	3	3	10.5	9	9.7	9.5
PIN 7	13.9	3	3	10.5	9	9.7	9.5
PIN 8	13.9	3	3	10.5	9	9.7	9.5
PIN 9	13.9	0	0	0	0	0	0

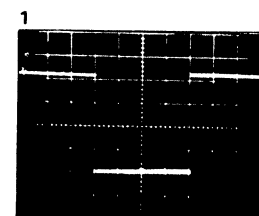
Main (Servo) C.B.A

REV S. : REVERSE SEARCH
FWD S. : FORWARD SEARCH

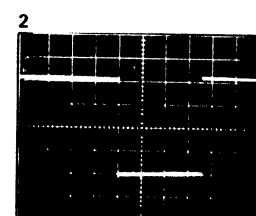
MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD. S		
TRNO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q 201	0	0	5.2	0	1.4	0	0	1.4	0	0	0	5.2	0	0	5	0	1.4	0	0	1.4	0
Q 202	0	12.1	0	0	2.4	0	0	2.4	0	0	9	0	0	9	0	0	9	0	0	9	0
Q 203	2.4	12.4	12.0	2.5	2.8	2.4	2.6	2.8	2.4	2.4	9.3	9	2.4	9.8	9.2	2.4	9.5	8.7	2.4	9.4	3
Q 206	13.5	12.5	13.9	2.8	2.8	2.2	2.8	2.8	2.2	9.8	9.3	9.8	9.2	9.2	8	9.8	9.7	9.1	9.8	9.6	9.4
Q 200	12.8	14.0	13.5	2.2	15	2.8	2.4	15	2.8	9.5	13.8	9.9	9	13.8	9.5	9.1	14.1	9.8	8.8	15	9.4

Main (Servo) C.B.A

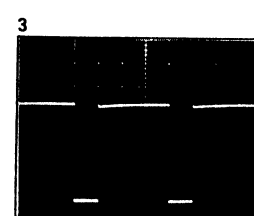
SERVO



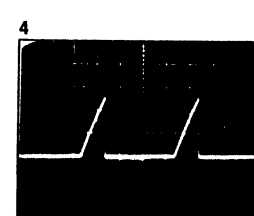
TP201
1V/5msec/cm
REC/PLAY



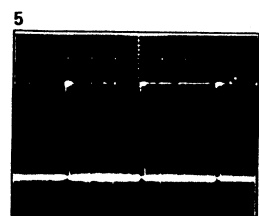
TP215
1V/5msec/cm
REC/PLAY



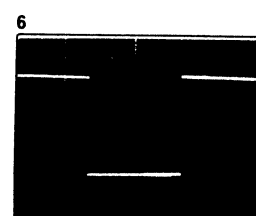
IC201-1
1V/10msec/cm
REC/PLAY



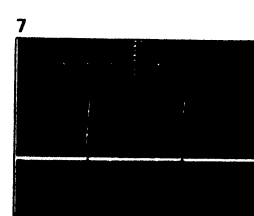
IC201-4
0.5V/10msec/cm
REC/PLAY



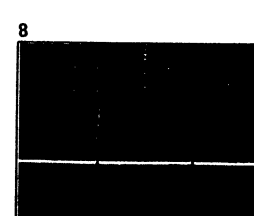
IC201-8
1V/5msec/cm
REC/PLAY



IC201-9
1V/5msec/cm
REC/PLAY



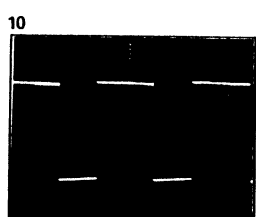
IC201-15
1V/10msec/cm
REC/PLAY



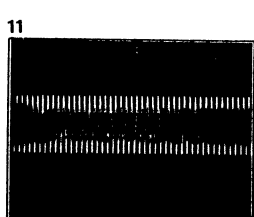
IC201-16
1V/10msec/cm
REC/PLAY



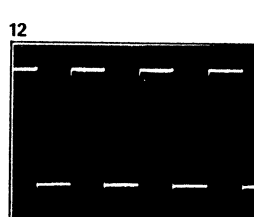
IC201-19
1V/2msec/cm
REC/PLAY



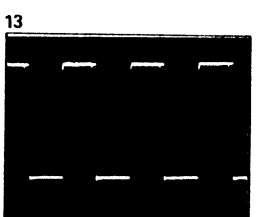
IC201-20
1V/10msec/cm
PLAY



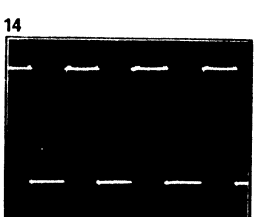
IC201-22
0.1V/1μsec/cm
REC/PLAY



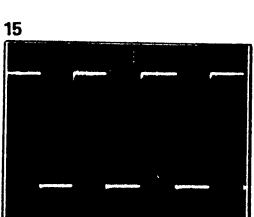
IC201-34
1V/10μsec/cm
REC/PLAY



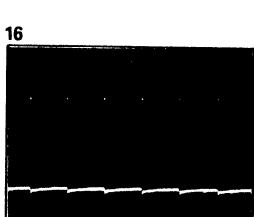
IC201-35
1V/10μsec/cm
REC/PLAY



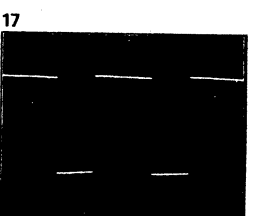
IC201-36
1V/10μsec/cm
REC/PLAY



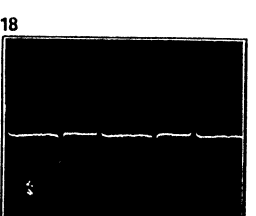
IC201-37
1V/10μsec/cm
REC/PLAY



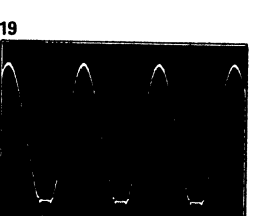
IC203-2
1V/0.5msec/cm
REC/PLAY



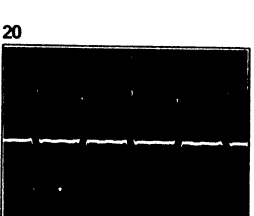
IC203-4
1V/10msec/cm
PLAY



IC203-7
0.5V/10msec/cm
PLAY

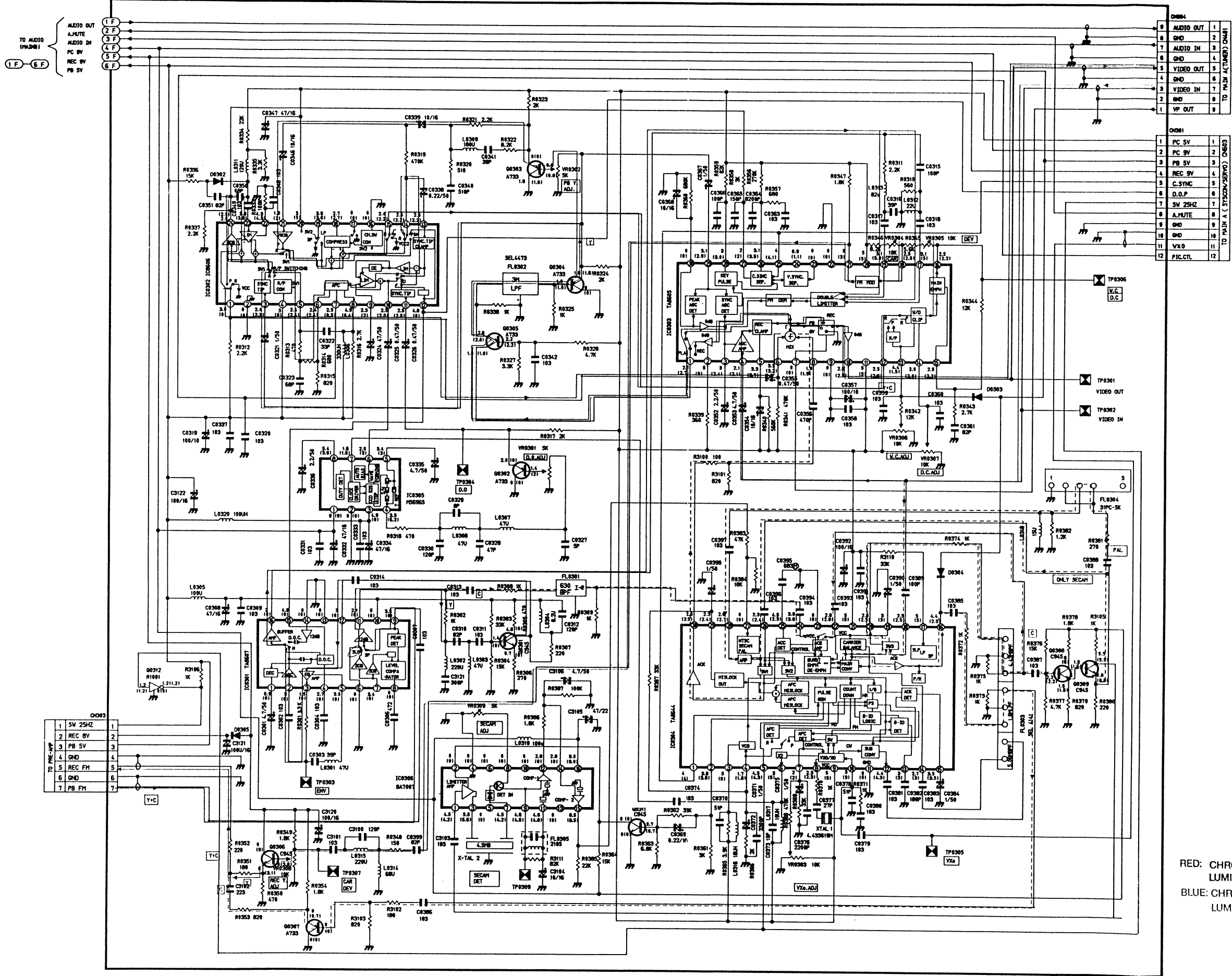


IC203-12
0.5V/0.5msec/cm
REC/PLAY



IC201-17
0.2V/10msec/cm
REC/PLAY

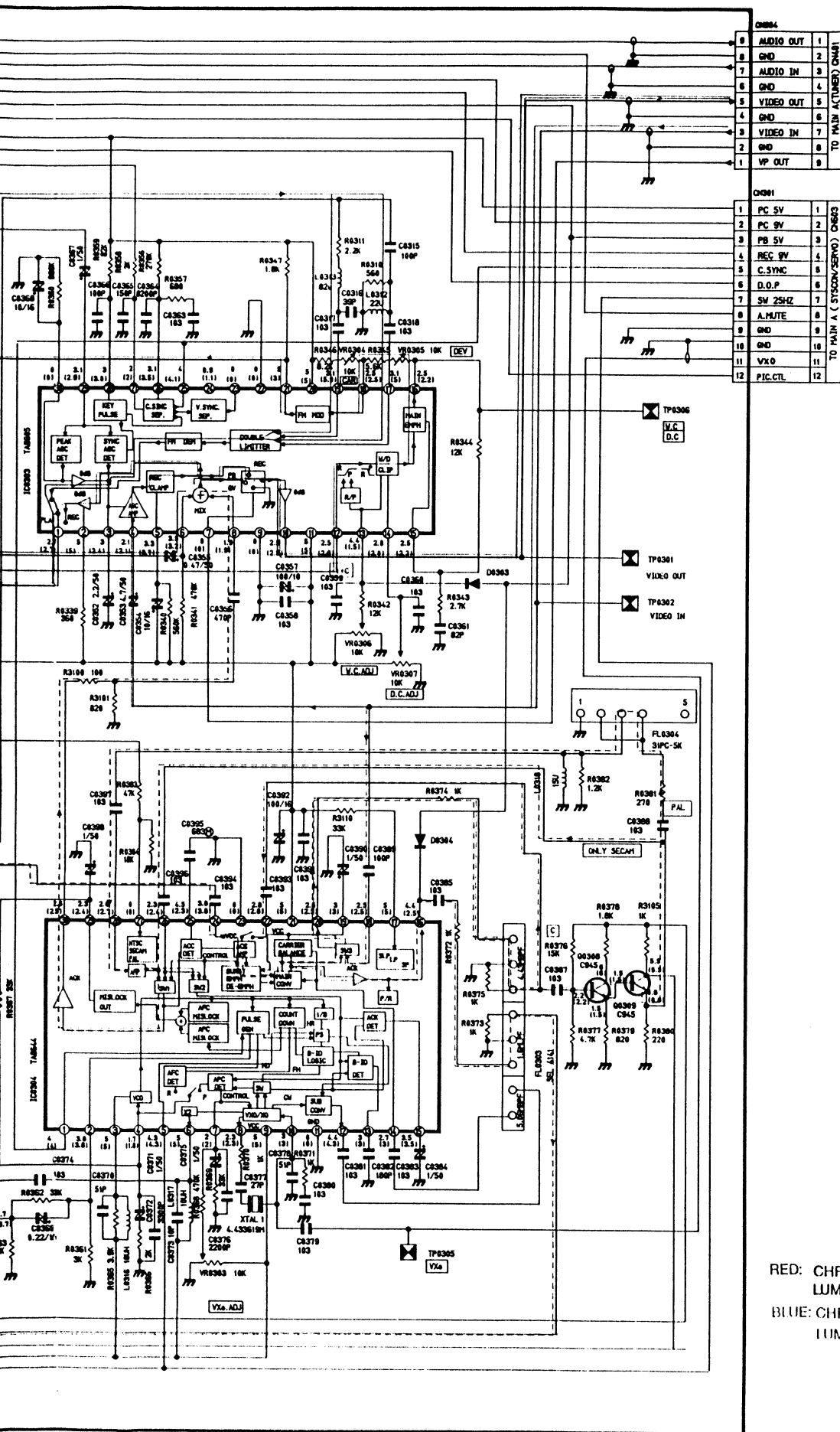
10-5. Luminance/Chrominance



RED: CHROMINANCE PLAYBACK
LUMINANCE PLAYBACK
BLUE: CHROMINANCE RECORD
LUMINANCE RECORD

MODE		
PIN NO.	STOP	REC
PIN 1	0	0
PIN 2	0	0
PIN 3	0	0
PIN 4	0	0
PIN 5	0.5	0
PIN 6	0	0
PIN 7	0	0
PIN 8	0	0
PIN 9	0	0
PIN 10	0	0
PIN 11	0	0
PIN 12	0	0
PIN 13	0	0
PIN 14	0	0
PIN 15	0	0
PIN 16	0	0

MODE		
PIN NO.	STOP	REC
PIN 1	0.2	3.1
PIN 2	0	0
PIN 3	2.4	2.3
PIN 4	0.2	5
PIN 5	0.6	2.4
PIN 6	0.6	2.4
PIN 7	2.5	2.5
PIN 8	0.3	5.0
PIN 9	2.0	2.0
PIN 10	2.2	2.2
PIN 11	2.5	2.5
PIN 12	0.2	0
PIN 13	2.4	2.5
PIN 14	2.0	2.2
PIN 15	2.3	2.2
PIN 16	0	0
PIN 17	0	0
PIN 18	2.7	2.7
PIN 19	3.6	3.6
PIN 20	5.0	5.0
PIN 21	1.8	2.0
PIN 22	4.3	4.3
PIN 23	2.8	3.8
PIN 24	2.1	2.0



REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	IC 301						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	0	0.9	0	0	0.9	0.9
PIN 2	0	0	3.0	0	0	3.0	3.0
PIN 3	0	0	1.5	0	0	1.5	1.5
PIN 4	0	0	2.7	0	0	2.6	2.7
PIN 5	0.5	0	3.5	0	0	3.4	3.5
PIN 6	0	0	0	0	0	0	0
PIN 7	0	0	3.4	0	0	3.4	3.5
PIN 8	0	0	0	0	0	0	0.1
PIN 9	0	0	3.5	0	0	3.4	3.5
PIN 10	0	0	4.9	0	0	4.9	4.9
PIN 11	0	0	2.1	0	0	2.1	2.1
PIN 12	0	0	3.0	0	0	3.0	3.0
PIN 13	0	0	0	0	0	0	0
PIN 14	0	0	0	0	0	0	0
PIN 15	0	0	4.8	0	0	4.8	4.8
PIN 16	0	0	2.0	0	0	2.0	2.0

Main (Luma/Chroma) C.B.A

REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	IC 302						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0.2	3.1	3.1	0.2	0.2	3.1	3.1
PIN 2	0	0	0	0	0	0	0
PIN 3	2.4	2.3	2.4	2.4	2.4	2.4	2.4
PIN 4	0.2	5	4.9	0.2	0	5	5.0
PIN 5	0.8	2.4	2.4	0.8	0.8	2.4	2.4
PIN 6	0.8	2.4	2.4	0.8	0.8	2.4	2.4
PIN 7	2.5	2.5	2.4	2.5	2.5	2.5	2.4
PIN 8	0.3	5.0	4.9	0.3	0.3	4.9	4.9
PIN 9	2.0	2.0	2.3	1.9	1.9	2.3	2.3
PIN 10	2.2	2.2	2.5	2.2	2.2	2.5	2.5
PIN 11	2.5	2.5	2.5	2.5	2.5	2.6	2.5
PIN 12	0.2	0	4.8	2.0	0.2	4.8	4.8
PIN 13	2.4	2.5	2.5	2.4	2.4	2.5	2.5
PIN 14	2.0	2.2	2.5	1.9	2.0	2.5	2.5
PIN 15	2.3	2.2	2.4	2.3	2.3	2.4	2.4
PIN 16	0	0	0	0	0	0	0
PIN 17	0	0	0	0	0	0	0
PIN 18	2.7	2.7	2.7	2.7	2.6	2.7	2.7
PIN 19	3.6	3.6	3.6	3.6	3.6	3.6	3.6
PIN 20	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 21	1.8	2.0	1.9	1.9	1.8	1.9	1.9
PIN 22	4.3	4.3	4.3	4.3	4.3	4.3	4.3
PIN 23	2.8	3.8	3.8	3.9	3.9	3.8	3.8
PIN 24	2.1	2.0	2.0	2.1	2.1	2.0	2.0

Main (Luma/Chroma) C.B.A

REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	IC 303						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	2.7	2.7	2.7	2.7	2.7	2.7	2.7
PIN 2	4.5	5.0	5.0	4.5	4.5	5.0	5.0
PIN 3	2.5	2.4	3.0	2.5	2.5	3.0	3.0
PIN 4	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PIN 5	3.6	3.7	3.3	3.6	3.6	3.3	3.0
PIN 6	3.3	3.2	3.5	3.3	3.3	3.7	3.6
PIN 7	0	0	0	0	0	0	0
PIN 8	1.9	1.9	1.9	1.9	1.9	1.9	1.9
PIN 9	0	0	0	0	0	0	0
PIN 10	1.9	1.5	2.5	1.9	1.9	2.7	2.9
PIN 11	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 12	2.3	2.2	2.5	2.3	2.3	2.5	2.5
PIN 13	1.5	1.5	5.0	1.5	1.5	4.4	4.4
PIN 14	2.0	2.0	2.0	2.0	2.3	2.0	2.0
PIN 15	2.3	2.2	2.5	2.3	2.3	2.5	2.5
PIN 16	2.3	2.2	2.5	2.3	2.3	2.5	2.5
PIN 17	5.0	5.0	3.1	5.0	5.0	3.1	3.1
PIN 18	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 19	5.0	5.0	3.1	5.0	5.0	3.1	3.1
PIN 20	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 21	3.0	3.0	5.0	3.0	3.0	5.0	5.0
PIN 22	0	0	0	0	0	0	0
PIN 23	0	0	0	0	0	0	0
PIN 24	0.9	1.1	0.9	0.9	0.9	0.9	0.9
PIN 25	2.0	4.1	0.4	2.0	2	0.4	0.4
PIN 26	3.6	3.5	3.1	3.6	3.6	3.2	3.4
PIN 27	2.1	2.0	2.0	2.2	2.1	2.2	2.5
PIN 28	1.4	3.7	0.4	1.4	1.4	0.4	0.4
PIN 29	3.0	2.9	3.1	3.0	3.0	3.1	3.4
PIN 30	0	0	0	0	0	0	0

Main (Luma/Chroma) C.B.A

REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	IC 304						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0.8	4	0.4	0.9	0.8	0.9	4.0
PIN 2	3.7	3.8	3.8	3.7	3.7	3.8	3.8
PIN 3	5.0	5	5.0	5.0	5.0	5.0	5.0
PIN 4	1.7	1.8	1.7	1.7	1.7	2.3	1.8
PIN 5	4.3	4.3	4.3	4.3	4.3	4.3	4.3
PIN 6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 7	2.2	2.0	2.0	2.2	2.2	2.0	2.0
PIN 8	2.5	2.3	2.3	2.5	2.5	2.3	2.3
PIN 9	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 10	3.2	3.0	3.0	3.1	3.1	3.0	3.0
PIN 11	0	0	0	0	0	0	0
PIN 12	4.3	4.3	4.4	4.3	4.3	4.3	4.3
PIN 13	3.0	3	3.0	3.0	3.0	3.0	3.0
PIN 14	2.7	3	2.7	2.7	2.7	2.7	3.0
PIN 15	2.4	2.4	2.3	2.3	2.3	2.4	2.4
PIN 16	0	0	4.4	0	0	4.4	0
PIN 17	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 18	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 19	2.9	3.0	3.0	2.9	3.0	3.0	3
PIN 20	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 21	5.0	5	5.0	5.0	5.0	5.0	5.0
PIN 22	2.7	2.8	2.8	2.7	2.7	2.8	2.8
PIN 23	0	0	0.0	0	0	0	0.0
PIN 24	1.7	1.7	2.8	1.7	1.7	2.8	1.7
PIN 25	3.8	2.3	4.5	3.8	3.8	4.0	2.3
PIN 26	2.4	2.4	2.3	2.4	2.4	2.3	2.4
PIN 27	0	0	0.0	0	0	0	0.0
PIN 28	2.7	2.7	2.8	2.7	2.7	2.8	2.7
PIN 29	1.7	2.4	2.3	1.8	1.8	2.3	2.4
PIN 30	2.8	2.8	0	2.8	2.8	0	2.8

Main (Luma/Chroma) C.B.A

REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

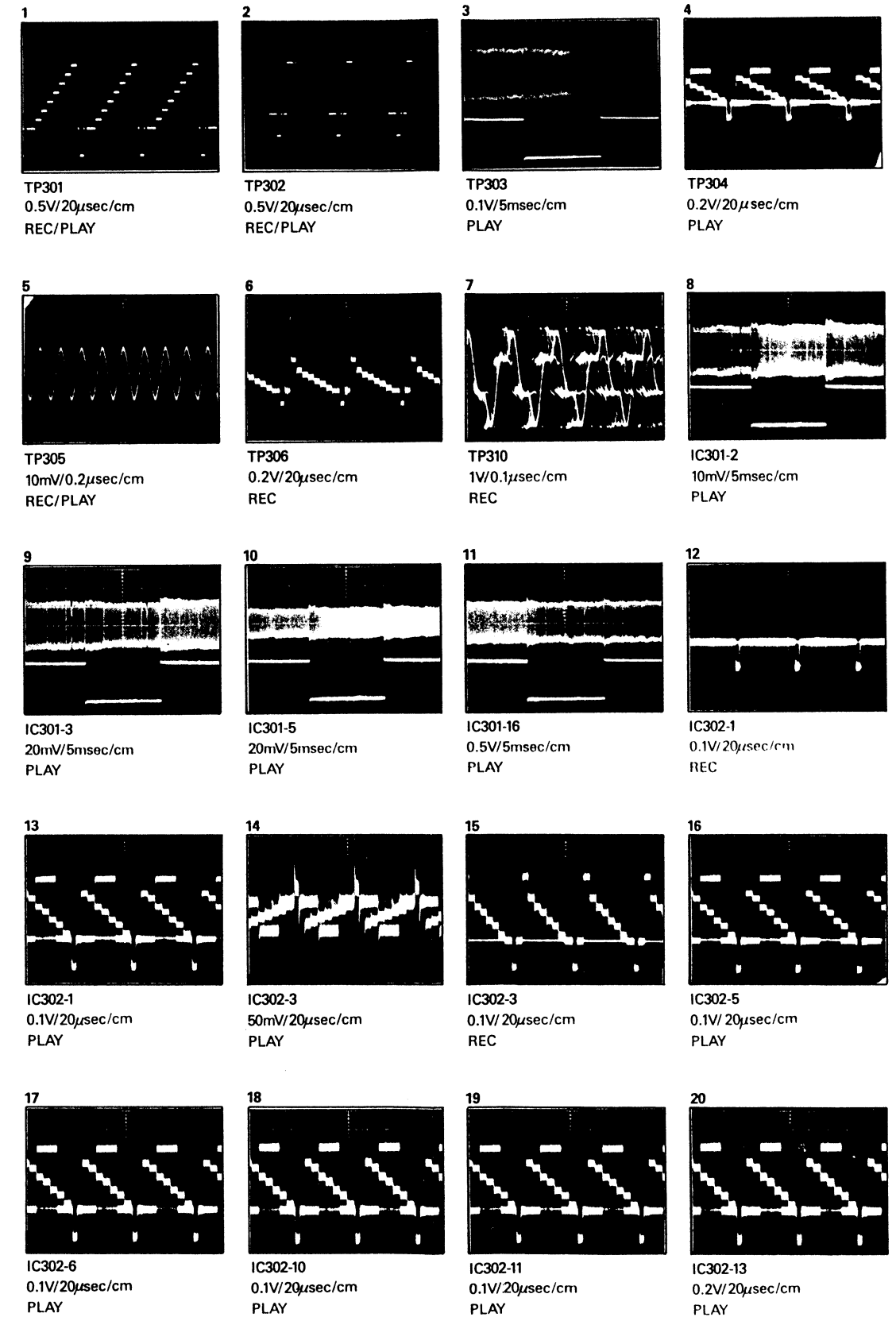
MODE	IC 305						
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	9	5	9	9	9	9	9
PIN 2	0	0	0	0	0	0	0
PIN 3	0	0	4.9	0	0	4.9	4.9
PIN 4	5.2	0	3.3	5.2	5.2	3.3	3.3
PIN 5	3.0	3.0	3.1	2	3	3.1	3.1
PIN 6	4.4	0	2.4	3.8	3	2.4	2.4
PIN 7	1.8	1.0	1.8	1.8	1.7	1.8	1.8
PIN 8	3.4	2.4	5.1	3.5	3.3	5.1	5.1

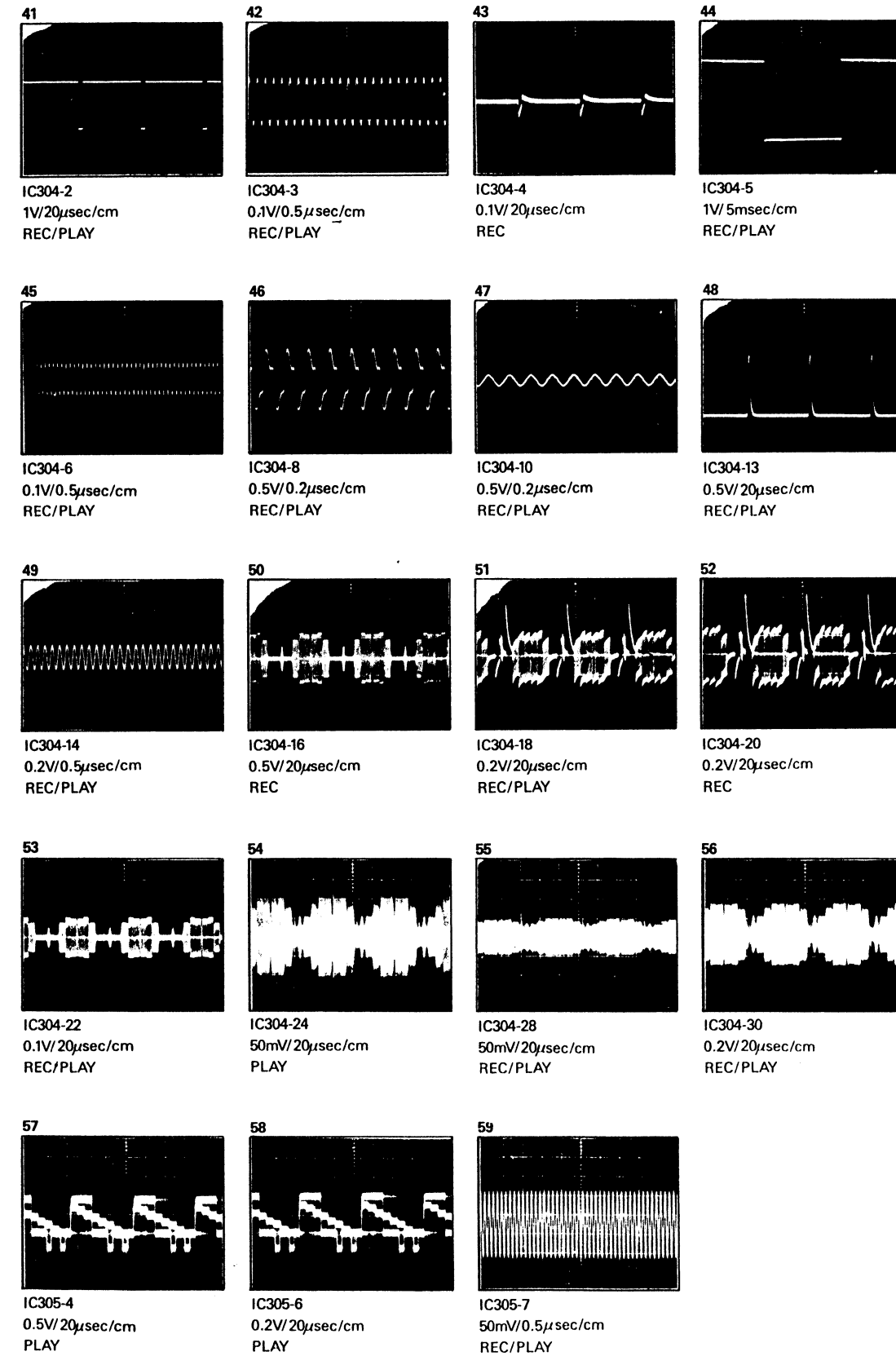
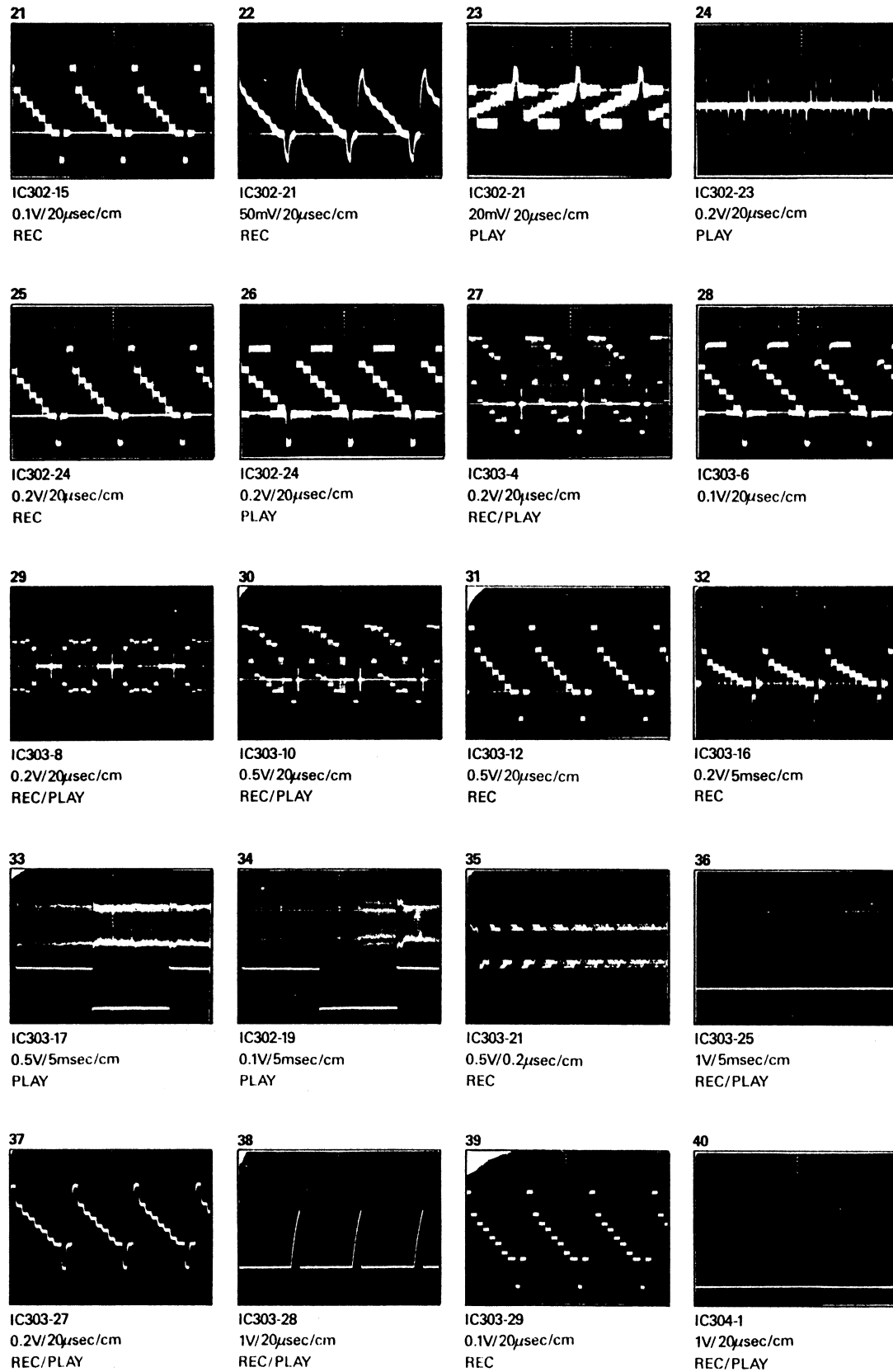
Main (Luma/Chroma) C.B.A

PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
Q301	E 0	0	0.7	0	0	0.7	0.7
	B 0	0	1.4	0	0	1.4	1.4
	C 0	0.2	4.8	0	0	4.8	4.8
Q302	E 0	0	0	0	0	0	0
	B 2	2	1.3	2	2	1.3	1.3
	C 0	0	2	0	0	2	2
Q303	E 0	0	0	0	0	0	0
	B 0.8	0.8	0.9	0.8	0.8	0.9	0.9
	C 1.5	1.5	1.8	1.5	1.5	1.8	1.8
Q304	E 0	0	0	0	0	0	0
	B 0.7	0.7	0.7	0.7	0.7	0.9	0.9
	C 1.3	1.3	1.4	1.3	1.3	1.5	1.5
Q305	E 0.7	0.7	0.8	0.7	0.7	0.8	0.8
	B 2.0	2	2	2	2	2	2
	C 2.8	2.8	2.8	2.8	2.8	2.8	2.8
Q306	E 0	3.1	0	0	0	0	0
	B 0	3.8	0	0	0	0	0
	C 0	9	2	0	0	2	2
Q307	E 0	0	0	0	0	0	0
	B 0	0	0	0	0	0	0
	C 0	0.4	0	0	0	0	0
Q308	E 3	3	3	3	3	3	3
	B 1	1	1	1	1	1	1
	C 0.8	0.8	0.8	0.8	0.8	0.8	0.8
Q309	E 2.7	2.7	2.7	2.7	2.7	2.7	2.7
	B 0.8	0.8	0.8	0.8	0.8	0.8	0.8
	C 0.5	0.5	0.5	0.5	0.5	0.5	0.5
Q311	E 0.4	0.4	0.4	0.4	0.4	0.4	0.4
	B 0.2	0.2	0.2	0.2	0.2	0.2	0.2
	C 0	0	0	0	0	0	0
Q312	E 0	0	0	0	0	0	0
	B 2.2	1.2	1.2	2.2	2.2	1.2	1.2
	C 0	1.2	1.2	0	0	1.2	1.2

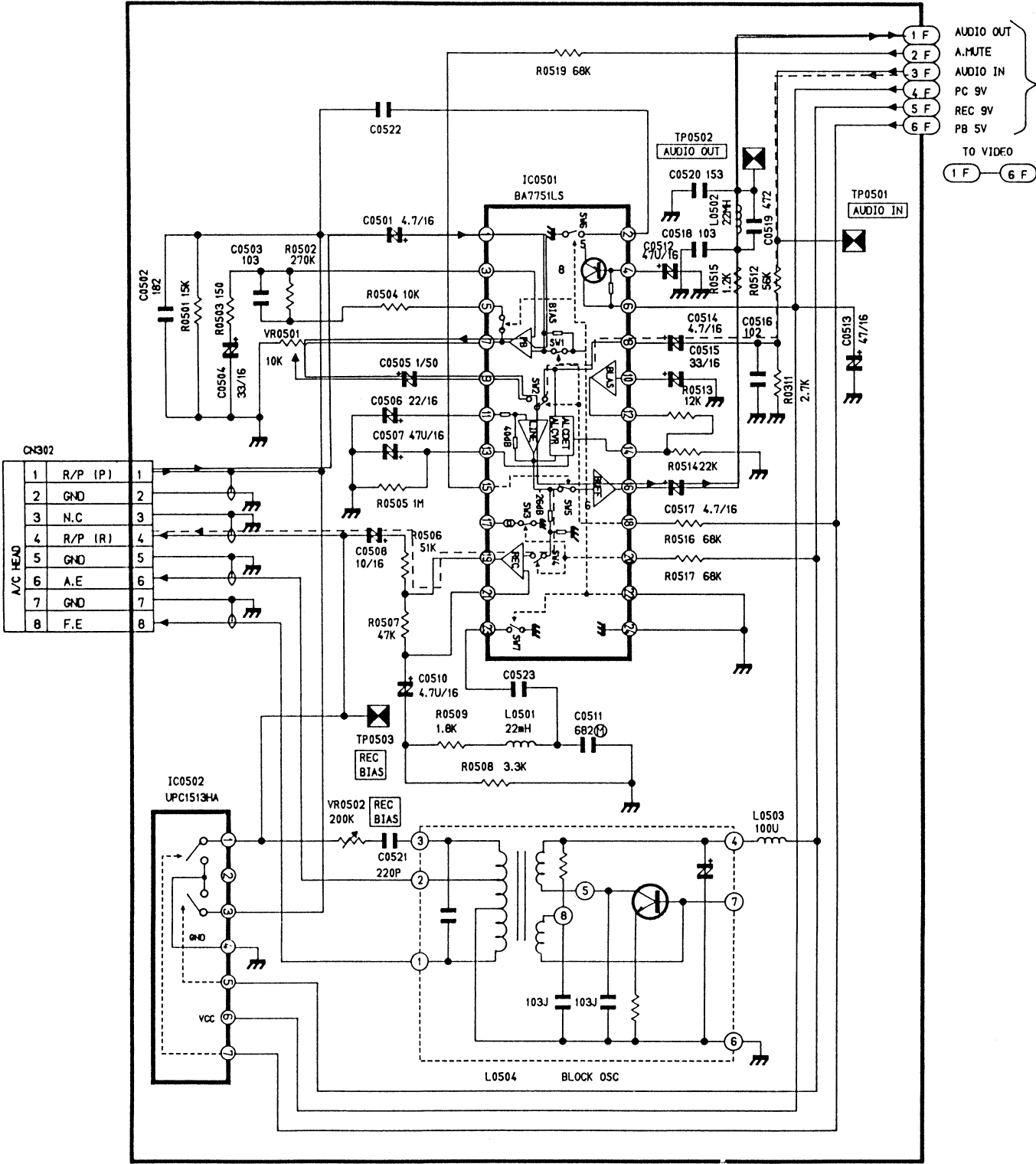
Main (Luma/Chroma) C.B.A

LUMINANCE/CHROMINANCE





10-6 Audio



AUDIO

RED: RECORD
PLAYBACK

REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

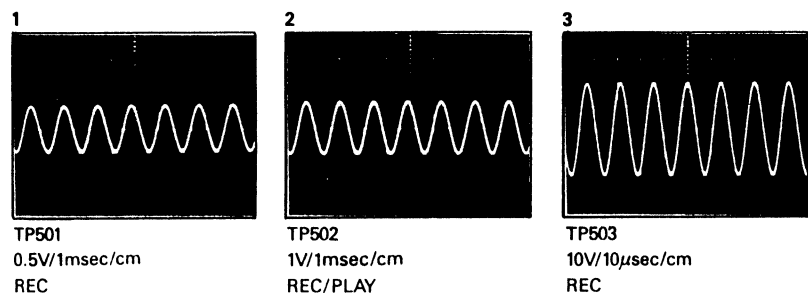
MODE	IC 0501						
	PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.
Main (Audio) C.B.A	PIN 1	3.8	4.0	4.0	4.0	4.0	4.0
	PIN 2	0	0	0	0	0	0
	PIN 3	3.8	4.0	4.0	4.0	4.0	4.0
	PIN 4	9.0	9.0	9.0	9.0	9.0	9.0
	PIN 5	4.0	4.0	4.2	4.0	4.0	4.0
	PIN 6	9.0	9.0	9.0	9.0	0	9.0
	PIN 7	4.0	4.0	4.0	4.0	4.0	4.0
	PIN 8	4.6	4.7	4.6	4.6	4.6	4.7
	PIN 9	4.6	4.4	4.3	4.3	4.6	4.4
	PIN 10	4.6	4.7	4.5	4.7	4.6	4.7
	PIN 11	4.6	4.4	4.3	4.7	4.6	4.4
	PIN 12	4.6	4.7	4.6	4.7	4.6	4.7
	PIN 13	0	0.7	0	0.6	0	0
	PIN 14	3.0	3.0	3.0	3.0	3.0	3.0
	PIN 15	4.1	4.2	4.0	4.0	4.2	4.2
	PIN 16	4.6	4.7	4.6	4.7	4.6	4.7
	PIN 17	0	0	0	0	0	0
	PIN 18	0.4	0	4	0.2	0.4	4.2
	PIN 19	4.6	4.6	4.6	4.7	4.6	4.7
	PIN 20	0	5.0	0	0	0	0
	PIN 21	4.6	4.7	4.6	4.7	4.6	4.7
	PIN 22	0	0	0	0	0	0
	PIN 23	0	0	0	0	0	0
	PIN 24	0	0	0	0	0	0

Main (Audio) C.B.A

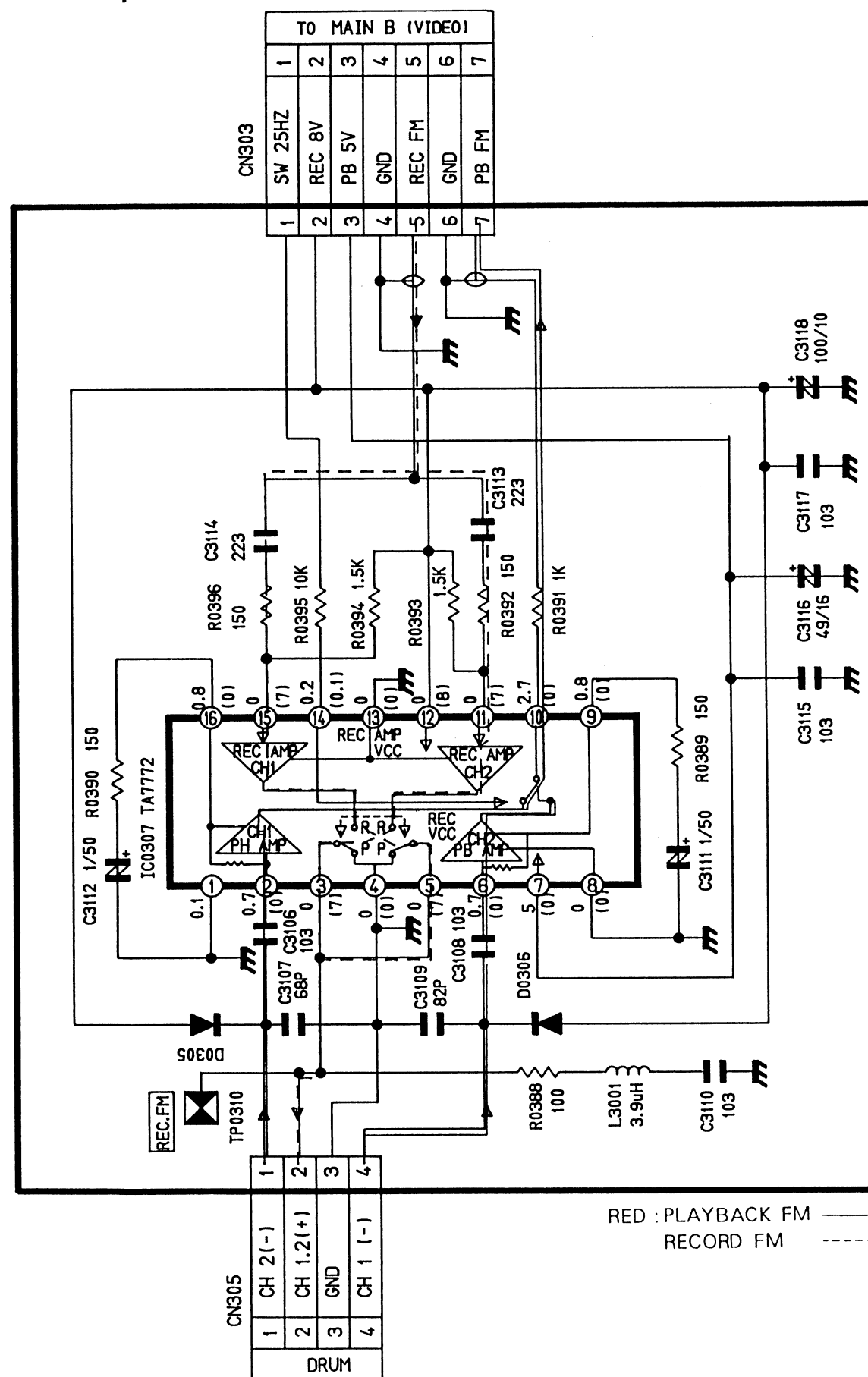
REV S.: REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	IC 0502						
	PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.
Main (Audio) C.B.A	PIN 1	0	0	0	0	0	0
	PIN 2	0	0	0	0	0	0
	PIN 3	0	0	0	0	0	0
	PIN 4	0	0	0	0	0	0
	PIN 5	0	9	0	0	0	0
	PIN 6	9	9	9	9	9	9
	PIN 7	0	0	5	0	0	5

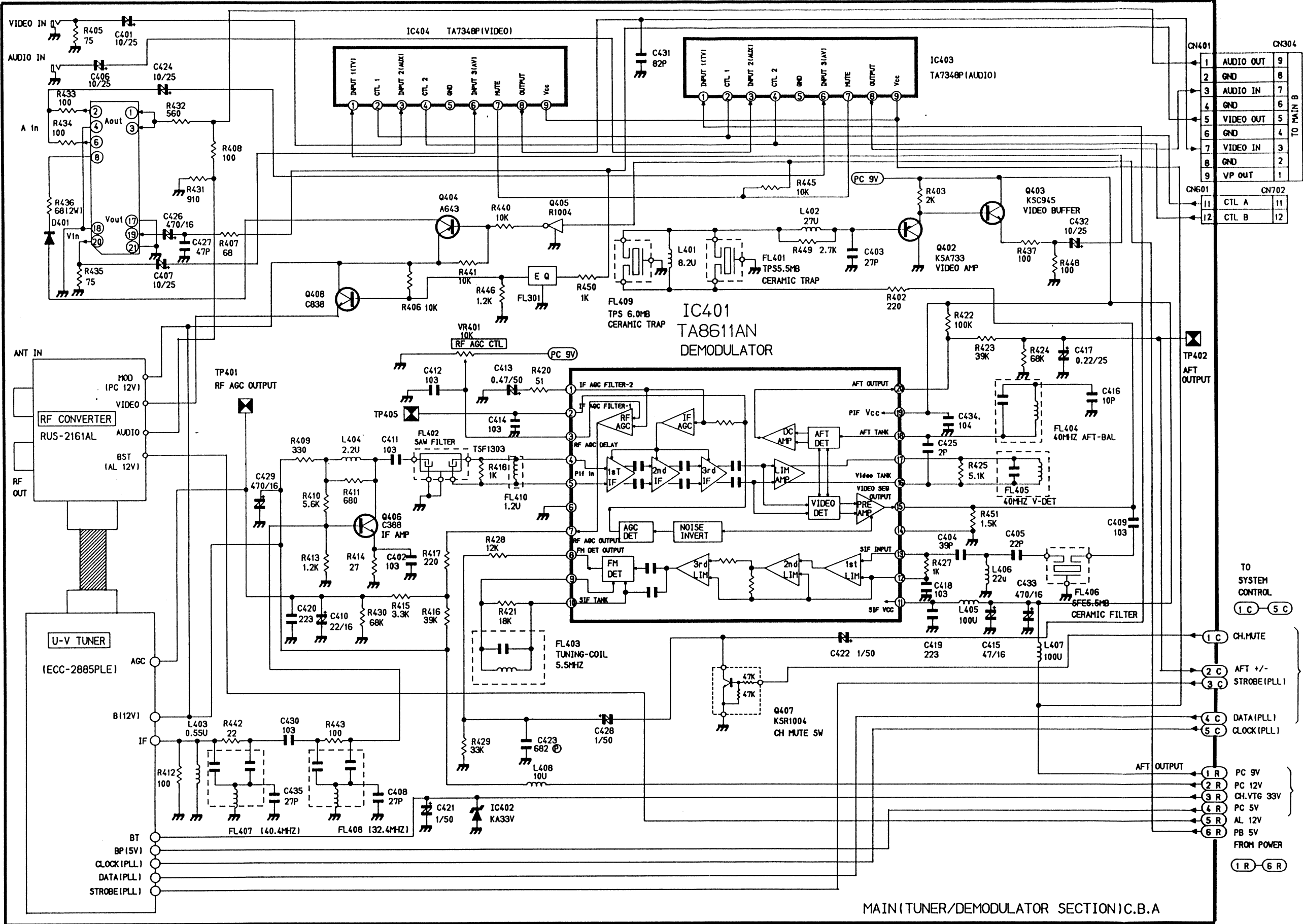
Main (Audio) C.B.A



10-7. Pre-Amp



10-8. Tuner



MODE	STOP	REC
PIN NO.		
PIN 1	5.8	5.8
PIN 2	5.8	5.8
PIN 3	3	3
PIN 4	4	4
PIN 5	4	4
PIN 6	0	0
PIN 7	4	4
PIN 8	4	4
PIN 9	6	6
PIN 10	6	6
PIN 11	9	9
PIN 12	2.4	2.4
PIN 13	2.4	2.4
PIN 14	0	0
PIN 15	3.8	3.8
PIN 16	6.2	6.2
PIN 17	6.2	6.2
PIN 18	4	4
PIN 19	9.0	9
PIN 20	5	5

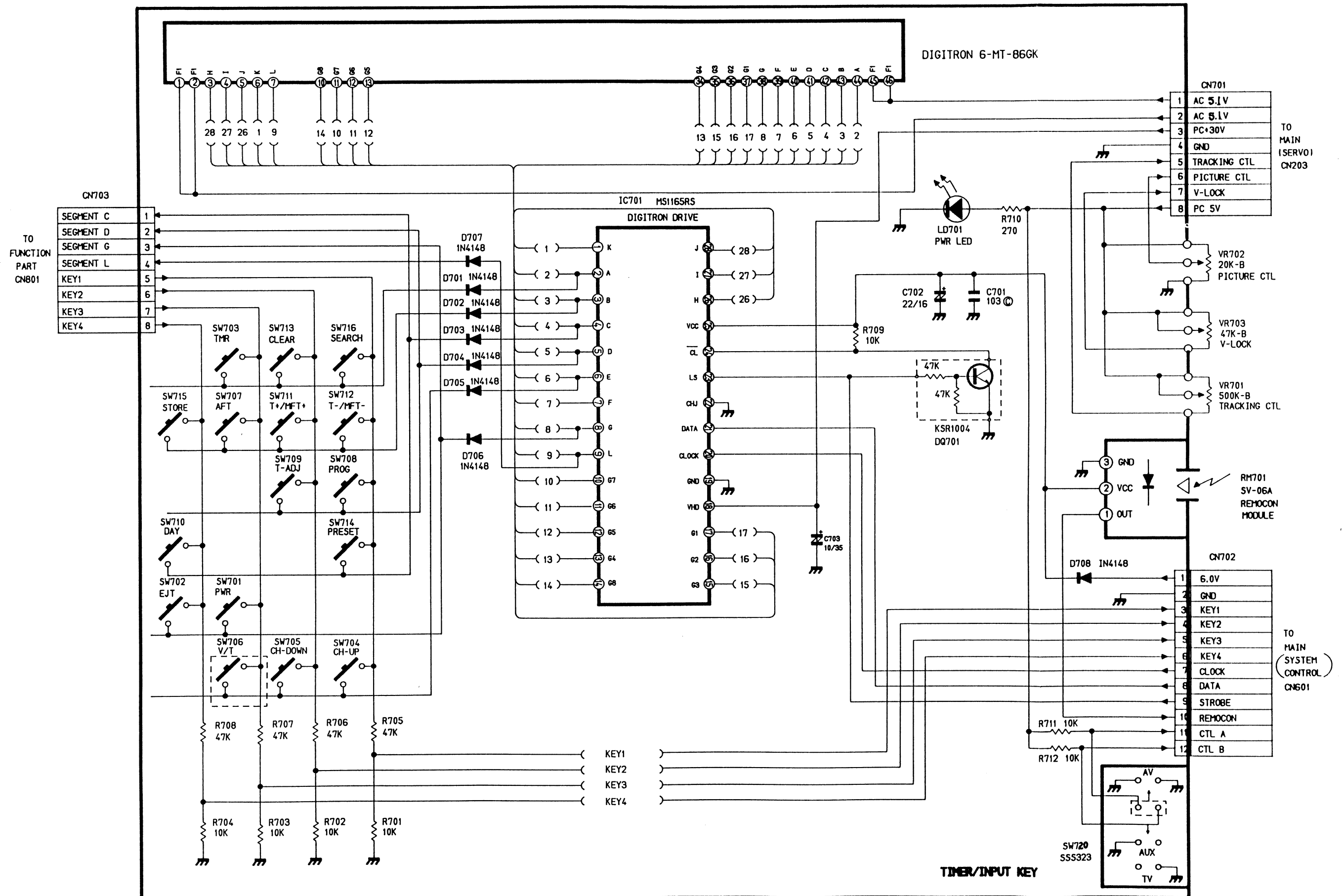
MODE	TRNO	E
	Q 402	3.8
	Q 403	3.3
	Q 404	10
	Q 405	0
	Q 406	0.9
	Q 407	0
	Q 408	0.8



REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

Main (Tuner/Demodulator) C.B.A

10-9. Timer/Input Key



REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE		IC 701					
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	30	30	30	30	30	30	30
PIN 2	30	30	30	30	30	30	30
PIN 3	30	30	30	30	30	30	30
PIN 4	30	30	30	30	30	30	30
PIN 5	30	30	30	30	30	30	30
PIN 6	30	30	30	30	30	30	30
PIN 7	30	30	30	30	30	30	30
PIN 8	30	30	30	30	30	30	30
PIN 9	30	30	30	30	30	30	30
PIN 10	30	30	30	30	30	30	30
PIN 11	30	30	30	30	30	30	30
PIN 12	30	30	30	30	30	30	30
PIN 13	30	30	30	30	30	30	30
PIN 14	30	30	30	30	30	30	30
PIN 15	30	30	30	30	30	30	30
PIN 16	30	30	30	30	30	30	30
PIN 17	30	30	30	30	30	30	30
PIN 18	31.2	31.2	31.2	31.2	31.2	31.2	31.2
PIN 19	0	0	0	0	0	0	0
PIN 20	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 21	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 22	0	0	0	0	0	0	0
PIN 23	0.5	0.5	5.0	0.5	0.5	0.5	0.5
PIN 24	5.0	5.3	5.3	5.3	5.3	5.3	5.3
PIN 25	5.3	5.3	5.3	5.3	5.3	5.3	5.3
PIN 26	30	30	30	30	30	30	30
PIN 27	30	30	30	30	30	30	30
PIN 28	30	30	30	30	30	30	30

Timer/Input Key C.B.A

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE		STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
Tr No.		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q 701		0	5.0	0.5	0	5.0	0.5	0	5.0	0.5	0	5.0	0.5	0	5.0	0	0	5.0	0.5	0	5.0	0.5

Timer/Input Key C.B.A

END SENSOR C.B.A



REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE		IC 205					
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	0	0	0	0	0	0
PIN 2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
PIN 4	2.3	14.8	14.7	14.7	14.7	2.2	14.7
PIN 5	5.0	14.7	5.0	5.0	5.0	5.0	5.0
PIN 6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 7	15.0	14.8	14.8	14.7	14.7	14.7	14.7
PIN 8	15.0	14.8	14.8	14.7	14.7	14.7	14.7
PIN 9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
PIN 10	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Sub Servo C.B.A

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE		IC 206					
PIN NO.	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	0	0	0	0	0	0
PIN 2	0.5	3.9	2.1	0.1	10.1	0.1	9.5
PIN 3	0.9	5.2	3.5	0.9	11.7	0.9	10.9
PIN 4	1.2	3.7	1.9	10.3	10.2	10.0	9.0
PIN 5	5.0	5.0	5.0	0	5.0	0	5.0
PIN 6	5.0	0	0	5.0	0	5.0	0
PIN 7	14.9	14.8	1.48	14.7	14.7	14.7	14.7
PIN 8	14.9	14.1	14.2	13.8	13.8	13.8	13.8
PIN 9	0.9	0.9	0.9	11.8	0.9	11.0	0.9
PIN 10	0.5	0.1	0.1	9.9	0.1	9.3	0.1

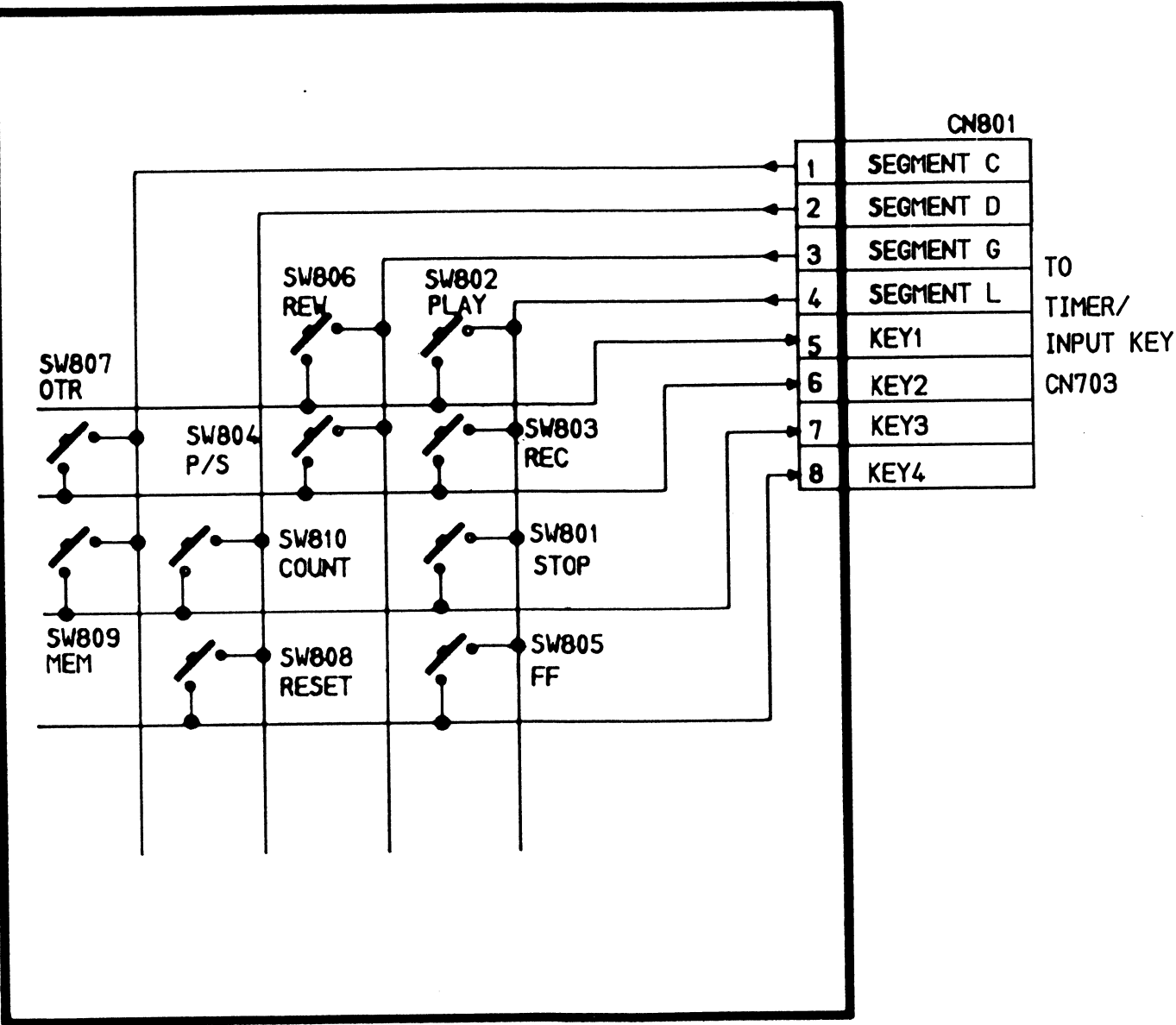
Sub Servo C.B.A

REV S. : REVERSE SEARCH
FWD S.: FORWARD SEARCH

MODE	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
Tr No.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q 204	0	0	4.9	0	14.7	0	0	14.7	0	0	14.7	0	0	14.7	0	0	0	4.9	0	14.7	0
Q 205	1.0	0	12.6	3.7	0	3.0	3.6	0	3.0	8.9	0	8.3	8.8	0	8.2	9.5	0	8.7	9.3	0	8.6
Q 208	14.9	2.2	14.9	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	2.2	14.7	14.7	14.7	14.7	14.7
Q 209	0	5.1	0.1	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—

Sub Servo C.B.A

10-11. Function Switch



10-12. Remote Control

